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EDITORIAL.

By the time this, the first part of Volume 9, is produced I shall have left Nigeria for a period of five months. However, contributions for the Bulletin should still be sent to my Nigerian address from where they will be posted on to me in Europe. I shall be returning to Ibadan at the beginning of August.

I feel I should remind members that all enquiries, orders and notices concerning Bulletins not received etc., should be sent to the Production Secretary, and not to me.

Roy H.Parker.

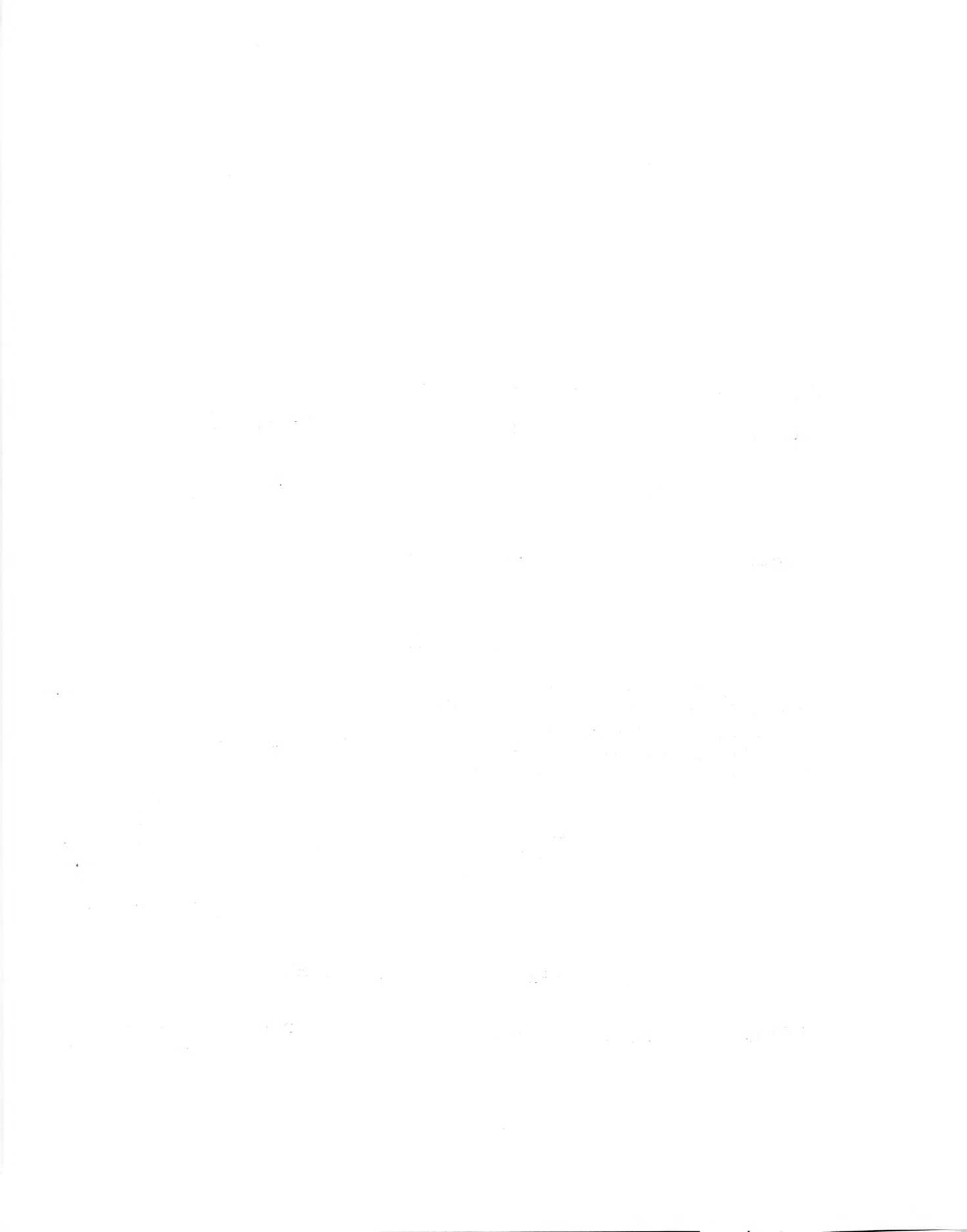
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RINGING IN NIGERIA, 1970

13th Annual Report

by

R.E.Sharland

Ringling in Nigeria during 1970 totalled 3,517 birds, mainly due to the efforts of Dr. and Mrs.J.A.Broadbent. They ringed 1,898 wagtails at the Ibadan roost and also ringed a number of waders and other birds during a Christmas expedition to Lome in Togo.

The Kano wagtail roost[†] dried up as a result of the long dry season but I found a better patch of Acacia staxacantha outside Kano for the autumn passage. I ringed 350 migrants in October and November; this is approximately the same number of birds per net-length as were caught by R.J.Dowsett at Mallamfatori in the autumn of 1968.

David Lewis went to Mallamfatori in March. He stayed at the regional Fisheries Research Station where there is not as much Salvadora as at the Federal Station so was not able to ring substantial numbers. Dr.J.R.Lang was too busy to ring at Vom but has resumed again in 1971.

The numbers of wagtails ringed in Finland and controlled at Ibadan is significant and it is of interest that another Finnish bird was controlled at Kano at the end of April 1971.

Scientific nomenclature follows White, C.M.N. (1960-65)
Check List of African Birds, Lusaka, Zambia.

Schedule 1 - Migrant birds ringed

		<u>1970</u>	<u>To date</u>
Little Bittern	<i>Ixobrychus minutus</i>	-	5
Squacco Heron	<i>Ardeola ralloides</i>	-	4
Teal	<i>Anas crecca</i>	-	2
Pintail	<i>Anas acuta</i>	-	2
Garganey	<i>Anas querquedula</i>	4	95
Shoveler	<i>Anas clypeata</i>	-	2
Pallid Harrier	<i>Circus macrourus</i>	-	1
Quail	<i>Coturnix coturnix</i>	-	1
Spotted Crake	<i>Porzana porzana</i>	-	1
Ringed Plover	<i>Charadrius hiaticula</i>	9	21
Little Ringed Plover	<i>Charadrius dubius</i>	5	51

		<u>1970</u>	<u>To date</u>
Black-tailed Godwit	Limosa limosa	-	1
Greenshank	Tringa nebularia	-	8
Marsh Sandpiper	Tringa stagnatilis	3	16
Wood Sandpiper	Tringa glareola	84	373
Green Sandpiper	Tringa ochropus	4	24
Common Sandpiper	Tringa hypoleucos	47	168
Redshank	Tringa totanus	-	2
Dusky Redshank	Tringa erythropus	2	11
Terek Sandpiper	Tringa terek	-	1
Common Snipe	Gallinago gallinago	11	35
Jack Snipe	Gallinago minima	2	15
Curlew Sandpiper	Calidris ferruginea	9	12
Little Stint	Calidris minuta	56	241
Temminck's Stint	Calidris temminckii	1	14
Sanderling	Calidris alba	-	1
Ruff	Philomachus pugnax	88	529
Black-winged Stilt	Himantopus himantopus	5	16
Common Tern	Sterna hirundo	-	1
Great-spotted Cuckoo	Clamator glandarius	-	3
Scops Owl	Otus scops	-	11
Hoopoe	Upupa epops	-	10
Wrynek	Jynx torquilla	7	41
Lesser Short-toed Lark	Calandrella rufescens	-	1
Sand Martin	Riparia riparia	-	1476
European Swallow	Hirundo rustica	60	1417
House Martin	Delichon urbica	-	1
Yellow Wagtail	Motacilla flava	2114	28039
White Wagtail	Motacilla alba	-	31
Tawny Pipit	Anthus campestris	-	3
Tree Pipit	Anthus trivialis	6	113
Red-throated Pipit	Anthus cervinus	2	128
Isabelline Shrike	Lanius collurio	-	4
Woodchat Shrike	Lanius s. senator	1	35
Corsican Woodchat Shrike	Lanius s. badius	-	1
Golden Oriole	Oriolus oriolus	-	4
Winchat	Saxicola rubetra	26	319
Wheatear	Oenanthe oenanthe	2	17
Black-eared Wheatear	Oenanthe hispanica	-	1
Rock Thrush	Monticola saxatilis	-	7
Blue Rock Thrush	Monticola solitaria	-	1
Redstart	Phoenicurus phoenicurus	20	185
Nightingale	Luscinia megarhynchos	27	222
Bluethroat	Luscinia svecica	1	4
Cetti's Warbler	Cettia cetti	-	2
Savi's Warbler	Locustella luscinioides	1	5
Sedge Warbler	Acrocephalus schoenobaenus	52-1652	
Reed Warbler	Acrocephalus scirpaceus	28	768
Blyth's Reed Warbler	Acrocephalus dumetorum	-	7
Great Reed Warbler	Acrocephalus arundinaceus	11	122
Icterine Warbler	Hippolais icterina	4	138

		1970	to date
Melodious Warbler	Hippolais polyglotta	10	38
Olivaceous Warbler	Hippolais pallida	-	116
Garden Warbler	Sylvia berin	109	1325
Blackcap	Sylvia atricapilla	-	21
Whitethroat	Sylvia communis	85	2490
Lesser Whitethroat	Sylvia corruca	1	79
Subalpine Warbler	Sylvia cantillans	21	143
Willow Warbler	Phylloscopus trochilus	150	583
Chiffchaff	Phylloscopus collybita	-	5
Bonelli's Warbler	Phylloscopus bonelli	3	18
Wood Warbler	Phylloscopus sibilatrix	6	126
Spotted Flycatcher	Muscicapa striata	1	236
Pied Flycatcher	Ficedula hypoleuca	2	219
Collared Flycatcher	Ficedula albicollis	-	23
Ortolan Bunting	Emberiza hortulana	-	6
Total migrants		3080	41949
Ethiopian birds ringed		437	14289

SCHEDULE 2. Recoveries outside Nigeria.

Ringed

Recovered.

Sand Martin Riparia riparia:

HR 42028. 2.4.69. Mallamfatori

27.7.69. Zaglat, Czechoslovakia. (49°06'N., 14°41'E.).

Whitethroat Sylvia communis:

HR 42368. 5.4.69. Mallamfatori.

26.4.70. Zliten, Nr. Tripoli, Libya (32°32'N., 14°37'E.).

Ruff Philomachus pugnax:

DB 63052. 18.8.68. Mallamfatori

24.8.69. Tsarichanka, Dnepropetrovsk, USSR. (48°55'N., 34°30'E.).

CR 40095. 24.4.68. Mallamfatori.

15.5.70. Somerokoski, Sukeva Kuopio, Finland (63°55'N., 27°33'E.).

SCHEDULE 2. (cont'd).

Ringed

Recovered.

Yellow Wagtail Motacilla flava:

31913. 2.2.67. Vom. 21.4.70. Ouled Abbou, Tunisia.

All rings British Museum except 31913 - Jos.

Co-ordinates: Mallamfatori 13°57'N., 13°20'E.

Vom 9°52'N., 8°53'E.

SCHEDULE 3. Recoveries and controls in Nigeria.

Little Ringed Plover Charadrius dubius:

Helgoland

80/487542. 14.6.69. Kiel, Denmark. Controlled: 6.2.70.

(54°20'N., 10°08'E) (12°53'N., 10°30'E.).
Nguru.

Nightingale Luscinia megarhynchos:

Paris

779430. 15.4.68. Oued el ksak, 7.3.70. Akure. (7°15'N.,
Tunisia. 5°15'E.).

European Swallow Hirundo rustica:

Brussels

A195721. 13.7.68. Zevelgen, Belgium. 2.3.70. Port H'court.
(50°48'N., 3°10'E.). (4°43'N., 7°05'E.).

Yellow Wagtail Motacilla flava:

Sweden

2325687. 17.8.69. Ottenby, Sweden. Controlled. 9.12.69
(56°12'N., 16°24'E.) Ibadan.

Finland

K587896 4.9.69 Tali, Helsinki. Controlled. 6.3.70
(60°13'N., 24°52'E.) Ibadan.

K734221 2.8.70 (1st.yr.) Kirkniemi, Controlled. 10.10.70
Lohja, Finland. Ibadan.
(60°11'N., 23°55'E.)

K709342. 31.7.70. (1st.yr.) Koivisto, Controlled 11.10.70.
Kangasala, Finland. Ibadan.
(61°27'N., 24°03'E.)

SCHEDULE 3 (cont'd).

K367891. 21.5.67. Tauvo, Slikajoki, 30.4.70. Emure-Ile,
Finland. Owg.
(64°49'N., 24°35'E.) (7°26'N., 5°28'E.).

White Stork Ciconia ciconia:

Spain

C06589 4.6.57. (pull.) Villanecies, -.12.69. Nguru.
Caceres, Spain. (39°15'N.,
5°52'W.).

C05083 25.5.67. Villanueva de la Serena, -.12.69. Nguru.
Spain. (38°58'N., 5°48'W.)

Helgoland

H 2632.15.7.60. Heiligenhafen, Germany. 28.3.70. Nguru.
(56°01'N., 11°56'E.)

SCHEDULE 4. Yellow Wagtails controlled in
different roosts in Nigeria.

B.M.

KJ36272. 20.10.67. Kano. Controlled. 1.1.70.
Ibadan. (ad. male. M.f.
thunbergi.)

Co-ordinates: Kano 12°N., 8°17'E.
Nguru 12°53'N., 10°30'E.
Ibadan 7°23'N., 3°56'E.

SCHEDULE 5. Sedge Warblers ringed and controlled
in Kano.

Ringed · Recaptured in subsequent winters.

		<u>1 Yr. later</u>	<u>2 Yrs. later.</u>	<u>3 Yrs. later.</u>
1962/63	14			
1963/64	71	1		
1964/65	21			
1965/66	41	3	1	
1966/67	164	1		
1967/68	72	2	1	
1968/69	52	2	2	1
1969/70	40			
1970/71	95	6		
	570	15	4	1

A report has recently been received of a Chiffchaff Phylloscopus collybita BR42449 that was ringed at Bathurst, Gambia, by J.O. Andrew on 10th. December 1970, and controlled on the Calf of Man, U.K., on 11th. April 1971.

The first British-ringed Chiffchaff to be recovered south of the Sahara was recovered in The Gambia having been ringed on the Calf of Man!

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A NEW SUBSPECIES OF FRECKLED NIGHTJAR
IN NIGERIA.

by

Roy H. Parker.

Caprimulgus tristigma pallidogriseus Parker and Benson (1971) has recently been described from five specimens collected in Nigeria. The following note is included here in the hopes that more information concerning the Freckled Nightjar in Nigeria can be gleaned from members of the Society who are not aware of this recent discovery.

White (1965) recognises three races of tristigma (tristigma, lentiginosus, sharpei) whilst Parker and Benson (op.cit.) consider that Clancey's (1965) description of a fourth race, granosus, is fully justified.

The detailed study of 92 specimens of C. tristigma collected from all parts of Africa within its range led to the following conclusions.

- (I) Caprimulgus tristigma tristigma Ruppell, 1840.
Wing: 168-187mm. mean: 178.5mm (37 specimens)
Range: Tanzania N. of 5°S., Ruanda, N.E. Congo (Upper Uele), Uganda, Kenya, Ethiopia and S. Sudan.
- (II) Caprimulgus tristigma lentiginosus Smith, 1845
Greyer than tristigma and averages larger.
Wing: 178-196mm. mean: 188.6mm (9 specimens).
Range: South West Africa.
- (III) Caprimulgus tristigma granosus Clancey, 1965.
Darker and greyer above than lentiginosus and lacking the buffy or vinaceous tones, and decidedly less buffy below.
Wing: 182-196 mm. mean 187.6 mm. (41 specimens).

Range: Rhodesia, Malawi, Congo and Tanzania, South of 8° S., intergrading with lentiginosus in Eastern Transvaal.

(IV) Caprimulgus tristigma sharpei Alexander, 1901.

The darkest and smallest race. Wing: 165-182 mm.
mean 173.3 mm (11 specimens).

Range: Central African Republic, Cameroun, Togo, Ghana, Mali and Guinea.

(V) Caprimulgus tristigma pallidogriseus Parker & Benson, 1971

Paler grey than any of the foregoing forms in especially strong contrast to sharpei. Wing: 178-184 mm.
mean: 182.2 mm. (5 specimens).

The details of the five Nigerian specimens from which pallidogriseus is described are as follows:

1. (The Type.) Female, 22nd. May 1961, Upper Ogun Estate, 15 miles N. of Iseyin, W.State, Nigeria. (8°10'N., 3°35'E.). Coll. F.C. Sibley. Wing: 183 mm.
2. Male, 6th. September 1962, Sha, Nigeria, 4,100 ft. (9°10'N. 8°50'E.). Coll. R.G. Newell. Wing: 184 mm.
3. Male, 28th. October 1951, Jos, Nigeria, 4,000 ft. 9°55'N., 8°53'E.). Coll. R.E. Sharland. Wing: 182 mm.
4. (Single wing) 7th. November 1960, Kari, Nigeria (10°45'N 9°00'E.). Coll. P. Blasdale. Wing: 178 mm.
5. (Colour Photograph) (Male) 24th. December 1969, Oyo, New Reservoir, W.State, Nigeria (7°50'N., 3°55'E.). Coll. J. Broadbent. Wing: 184 mm.

On present knowledge pallidogriseus is interposed geographically between sharpei, to the west, from Togo to Guinea, and to the east, in Cameroun and the Central African Republic.

The Freckled Nightjar has been recorded for Nigeria in every month of the year except February and March. Mackworth-Praed & Grant (1970) record C. tristigma in breeding conditions in Nigeria in February but we do not know the source of this information, and Brown (1948) whilst describing two breeding records and the collection of a male with "much enlarged testes" concluded that the species bred in Nigeria (Kaba Province, Mid-West State) at the beginning of the rains (April) June). However, it must be pointed out that there is no evidence that any of the five specimens of pallidogriseus listed above were in breeding condition, but it is unlikely that pallidogriseus will be found to be a migrant, as all the evidence points to the fact that the

species, and therefore, all the other races are virtually sedentary although local movement has been observed in Zambia and is thought to occur in Rhodesia. It would appear, if this latter theory is correct, that pallidogriseus is restricted in range to the Jos Plateau in Central Nigeria and the inselbergs that surround it in lowland savanna.

I would be most grateful for any information regarding this species in Nigeria especially breeding information, observations (February-March) and specimens.

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.....

NOTES.

VULTURES by P.J. Mundy & A.W. Cook.

(a) Common Vulture, Neophron monachus.

In our experience, after examining nearly 100 nests this small vulture has a clutch of one. We know of only one recorded instance where two eggs were laid, also in Nigeria (R. Shuel in Boughton-Leigh, 1932, Ibis, p. 458).

So far we have added one egg each to the clutches of two pairs of vultures. In one, both eggs were similar in size and colour, and the adult had already been incubating its own egg for at least three weeks. It accepted the new egg and has successfully hatched both, three or four days apart. We examined the nest during the actual hatching of the second chick and one of us had to lift the adult off

the nest! We should add that the hatching chick was cheeping all the while, but neither the elder chick nor the adult were vocalizing.

In the second nest, the adult had been incubating its own egg for at least one week. The new egg was markedly different in colour, being heavily spotted with brown, whereas the original egg was wholly white. The nest was examined two days later when only one egg remained, that of the sitting bird. Fragments of the "foreign" eggshell were present, but more interestingly, a small rock half the size of a tennis ball. Should we jump to the obvious conclusion, since we know that the Egyptian Vulture Neophron percnopterus in East Africa can break ostrich eggs with rocks? But further than this, what intentions should we attribute to the sitting bird?

(b) Ruppell's Griffon, Gyps ruppellii.

On a recent visit to Waza National Park (N.Cameroun) in December P.J.M. found a nesting colony of Ruppell's Griffon on a very small rocky hill at the entrance of the Park. Photos of incubating birds were obtained from a range of 25 yds. and also some cine film was taken. There were at least 12 nests.

We believe this to be the second confirmed breeding site of G.ruppellii in West Africa, the first being on Kotorkoshi inselberg (B.N.O.S. vol.8, 1971, p.46).

.....
AFRICAN BLACK SWIFT Apus barbatus FROM
OBUDU PLATEAU: A SPECIES NEW TO NIGERIA.

by Roy H.Parker.

Some time ago a specimen, labelled Apus apus, was discovered (in the collections of the Zoology Museum, Univ. Ibadan) not to be of this species, but an African Black Swift Apus barbatus.

The specimen was collected by F.C.Sibley on 19th.March 1961, at Obudu Plateau, Eastern Nigeria (ca.6°40'N., 9°10'E.). The bird, an adult female, weighed 45.8grms and had wing, bill and tarsus lengths of 177, 6.5 and 14mm respectively.

The bird further proved to be of the Fernando Poo sub-species Apus barbatus sladeniae, thereby constituting only the fourth authenticated record of the race from mainland Africa, the others being represented by

a specimen from Bakossi, S.Cameroun (vide. Bannerman, 1953) and two from Mt.Moco in Angola (Brooke 1970). The specimen was sent to the British Museum (Nat.Hist.) for comparison and to A.E.De Roo who had recently described a new race A.b.serlei (De Roo 1970) from the Bamenda Range in S.W.Cameroun about 90 miles from the locality where the present specimen was collected.

The African Black Swift is distributed widely in mountainous regions throughout Africa except Ethiopia and three sub-species have been described for West Africa:- A.b.glanvillei Benson, from a single specimen from Robupr, Sierra Leone; A.b.sladeniae (Ogilvie-Grant) Fernando Poo and adjacent S.Cameroun and Mt.Moco, Angola; and A.b.serlei De Roo from two specimens from Sabga, nr. Bamenda, Cameroun.

This article is an extract from a more detailed paper (Parker 1971), which is placed here for the benefit of those ornithologists in West Africa who do not have the opportunity of reading the Bulletin of the British Ornithologists Club.

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152-153.
-

OLIVE-TREE WARBLER Hippolias olivetorum

AT KANO: A SPECIES NEW TO WEST AFRICA.

by R.E.Sharland.

The harmattan started early in Nigeria (17th.October 1971) and easterly winds prevailed for the following week. On 22nd.October I caught a striking warbler in my nets which on examination proved to be an Olive-tree Warbler Hippolias olivetorum. The upper parts were grey with a small white supercilium and the under parts white. The head had a very marked Hippolias-type peak and the bill was long and flattened. There was a very distinct wing panel caused by the pale outer webs of the secondaries. The outer tail feathers had pale tips. Measurements were: Wing: 83mm. Tail: 62mm. Bill: 18mm. Tarsus: 23mm. The wing formula was as follows: Wing point (longest primary) 3rd., 4th -1mm., 5th -4mm., 2nd -5mm. The bird was ringed and released. This appears to be the first record of the Olive-tree Warbler in West Africa.

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FURTHER OBSERVATIONS OF BUFF-HEADED

WOOD HOOPOE Phoeniculus bollei.

by Netta Robinson.

R.A.Honeywell (Some Interesting Observations from Ghana June 1971. BNOS 8:31) remarks on the appearance of Phoeniculus bollei in Ashanti.

I have records from Ilesha in Western Nigeria in 1964 of the same species in which the buff on the face, forehead and throat was distributed in the manner described by Honeywell (op.cit.). The birds which I observed, quite closely and frequently over a period of one year, also had red bills, I did not see any with horn coloured bills, and they moved about in groups of three. I have no record of the colour of the feet.

At the time, after consideration, I assumed them to be P.b.okuensis although, as pointed out by Honeywell, Bannerman (1953, Birds of West & Equatorial Africa.Vol.I.) regards this race as being restricted to the montane forest area of Lake Oku, in Cameroun.

Specimens in the Zoology Museum, Univ. Ibadan, from Gambari Forest Reserve, Western Nigeria, are typical nominate race P.b.bollei. It should also be remembered that okuensis has no buff colouration on the sides of the face. Ed.

.....

LONG-LEGGED BUZZARDS Buteo rufinus

NEAR KANO

by R.E.Sharland.

There have been several records of Long-legged Buzzards Buteo rufinus in Nigeria in recent years (BNOS 1 (4): 15; 5:45 & 53). In February 1968, R.J.Dowsett and I found one in an area of waste land upon which are a large number of wireless masts. This bird stayed until the end of March. In each subsequent year I have observed a Long-legged Buzzard in this area and this winter (1971/72) there have been two birds.

In January 1970 I discovered another Long-legged Buzzard in an area of scrub, seventeen miles ENE of Kano, at Gesawa (12° 8' N., 8° 45' E), and here too buzzards have been observed in every subsequent winter.

All the specimens observed to date have been pale phased birds, with pale heads and very pale, unbarred, tails. The underwing pattern is striking with whitish flight feathers which are dark tipped and a darkish patch at the carpal joint.

When disturbed the birds usually fly slowly from one Baobab tree to another, although once (at Gesawa) I did observe a buzzard soaring.

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EDITORIAL

By the time this issue is circulated the last of the originators of the Nigerian Ornithologists Society, R.E. (Bob) Sharland will have left Nigeria to take up residency in England, and at the same time another long time supporter and contributor to the Bulletin, Herman H. Gray, will also be leaving "the coast" to live in America. I am sure that members will join with me in wishing these two stalwart West African ornithologists, all the very best of success in their new "habitats".

Roy H Parker

.....

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1. The first part of the paper is devoted to a general discussion of the problem. It is shown that the problem is of great importance in the theory of differential equations and in the theory of the calculus of variations. The second part of the paper is devoted to a detailed study of the problem. It is shown that the problem is of great importance in the theory of differential equations and in the theory of the calculus of variations. The third part of the paper is devoted to a detailed study of the problem. It is shown that the problem is of great importance in the theory of differential equations and in the theory of the calculus of variations.

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RINGING IN NIGERIA 1971

14th Annual Report

by

R.E.Sharland

During 1972, 2083 birds were ringed in Nigeria. Dr. and Mrs. J.A. Broadbent were responsible for just over one third of these before they left Ibadan; we are grateful for what they accomplished in their short stay in Nigeria and wish them success elsewhere.

The Government of North Eastern State has recently engaged a Zoologist (Birds): ringing in Nigeria in the future may depend largely on what he can do in Maiduguri and on Lake Chad.

The autumn passage in Kano was even better than that of 1970: amongst the interesting birds ringed was a very fine Olive-tree Warbler Hippolais olivetorum. This is the first record of this species from West Africa (see BNOS 1972, 9:11).

Schedule 1 - Migrant birds ringed

		<u>1971</u>	<u>To date</u>
Little Bittern	<i>Ixobrychus minutus</i>	-	5
Squacco Heron	<i>Ardeola ralloides</i>	-	4
Teal	<i>Anas crecca</i>	6	8
Pintail	<i>Anas acuta</i>	1	3
Garganey	<i>Anas querquedula</i>	1	96
Shoveler	<i>Anas clypeata</i>	-	2
Pallid Harrier	<i>Circus macrourus</i>	-	1
Quail	<i>Coturnix coturnix</i>	-	1
Spotted Crake	<i>Porzana porzana</i>	-	1
Ringed Plover	<i>Charadrius hiaticula</i>	2	23
Little Ringed Plover	<i>Charadrius dubius</i>	-	51
Black-tailed Godwit	<i>Limosa limosa</i>	-	1
Greenshank	<i>Tringa nebularia</i>	1	9
Marsh Sandpiper	<i>Tringa stagnatilis</i>	1	17
Wood Sandpiper	<i>Tringa glareola</i>	93	466
Green Sandpiper	<i>Tringa ochropus</i>	3	27
Common Sandpiper	<i>Tringa hypoleucos</i>	3	171
Redshank	<i>Tringa totanus</i>	-	2
Dusky Redshank	<i>Tringa erythropus</i>	1	12
Terek Sandpiper	<i>Tringa terek</i>	-	1
Common Snipe	<i>Gallinago gallinago</i>	10	45
Great Snipe	<i>Gallinago media</i>	1	1
Jack Snipe	<i>Gallinago minima</i>	1	16

		1971	To date
Curlew Sandpiper	Calidris ferruginea	3	15
Little Stint	Calidris minuta	11	252
Temminck's Stint	Calidris temminckii	-	14
Sanderling	Calidris alba	-	1
Ruff	Philomachus pugnax	12	541
Black-winged Stilt	Himantopus himantopus	1	17
Common Tern	Sterna hirundo	-	1
Great-spotted Cuckoo	Clamator glandarius	-	3
Scops Owl	Otus scops	-	11
Hoopoe	Upupa epops	4	14
Wryneck	Jynx torquilla	5	46
Lesser Short-toed Lark	Calandrella refescens	-	1
Sand Martin	Riparia riparia	1	1477
European Swallow	Hirundo rustica	45	1462
House Martin	Delichon urbica	1	2
Yellow Wagtail	Motacilla flava	943	28982
White Wagtail	Motacilla alba	-	31
Tawny Pipit	Anthus campestris	-	3
Tree Pipit	Anthus trivialis	5	118
Red-throated Pipit	Anthus corvinus	1	129
Isabelline Shrike	Lanius collurio	-	4
Woodchat Shrike	Lanius s. senator	3	36
Corsican Woodchat Shrike	Lanius senator badius	-	1
Golden Oriole	Oriolus oriolus	-	4
Whinchat	Saxicola rubetra	73	392
Wheatear	Oenanthe oenanthe	4	21
Black-eared Wheatear	Oenanthe hispanica	-	1
Rock Thrush	Monticola saxatilis	1	8
Blue Rock Thrush	Monticola solitaria	-	1
Redstart	Phoenicurus phoenicurus	18	203
Nightingale	Luscinia megarhynchos	36	258
Bluethroat	Luscinia svecica	-	4
Cetti's Warbler	Cettia cetti	-	2
Savi's Warbler	Locustella luscinioides	1	6
Sedge Warbler	Acrocephalus schoenobaenus	111	1763
Reed Warbler	Acrocephalus scirpaceus	63	831
Blyth's Reed Warbler	Acrocephalus scirpaceus b	-	7
Great Reed Warbler	Acrocephalus arundinaceus	14	136
Icterine Warbler	Hippolais icterina	8	146
Melodious Warbler	Hippolais polyglotta	6	44
Olivaceous Warbler	Hippolais pallida	1	117
Garden Warbler	Sylvia borin	154	1479
Blackcap	Sylvia atricapilla	-	21
Whitethroat	Sylvia communis	43	2533
Lesser Whitethroat	Sylvia curruca	1	80
Subalpine Warbler	Sylvia cantillans	13	156
Willow Warbler	Phylloscopus trochilus	187	770
Chiffchaff	Phylloscopus collybita	-	5
Bonelli's Warbler	Phylloscopus bonelli	-	18

		<u>1971</u>	<u>To date</u>
Wood Warbler	Phylloscopus sililatrix	11	137
Spotted Flycatcher	Muscicapa striata	15	251
Pied Flycatcher	Ficedula hypoleuca	2	221
Collared Flycatcher	Ficedula albicollis	-	23
Ortolan Bunting	Emberiza Hortulana	-	6
Total: Palaeartic Migrants		1922	43871
Ethiopian Birds		161	14450
		<u>2083</u>	<u>58321</u>

Schedule 2 - Recoveries outside Nigeria

Garden Warbler Sylvia borin

HN.72118 Ringed 9.10.70 Kano Recovered 1 2.71 Kinshasa, Congo
(4° 40'S., 15° 40'E.)

HR.46088 " 30.9.69 Kano Found dead 28.5.71 Luhesand, E.Elbe,
Germany (53° 33'N., 9° 45'E.)

Schedule 3 - Recoveries inside Nigeria

Yellow Wagtail Motacilla flava

K424500 Ringed 20.8.69 Haspalantahti Sotkamo Oulo Finland
(64° 08'N., 28° 15'E.)
Recovered and Released Kano 27.4.71

Willow Warbler Phylloscopus trochilus

K95.548 Ringed 14.8.70 La Armuna, La Grauja Segovia Spain
(40° 53'N., 4° 01'W.)
Reported in Daily Times 20.11.70 as being
found at Kakwagom Ogoja (6° 40'N., 8° 45'E.)

White Stork Ciconia ciconia

BB 726 Ringed (pull) 11.6.66 Mornheim Bas Rhein
(48° 45'N., 7° 39'E.)
Recovered - 12.67 Ngulde Biu
(10° 36'N., 12° 11'E.)

Schedule 4 - Controls in Nigeria

Yellow Wagtail Motacilla flava

31100	Ringed	15.12.66	Vom	Controlled	23.11.71	Vom
AX81071	"	30. 3.67	"	"	7.12.71	Vom

Whitethroat Sylvia communis

HJ35205	Ringed	2. 3.69	Vom	"	29.11.71	Vom
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Subalpine Warbler Sylvia cantillans

HN72293	Ringed	4.11 70	Kano	"	27.10.71	Kano
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All Rings British Museum except 31100=Jos, K424500=Helsinki,
K 95 548=Madrid and BB726=Paris

Co-ordinates Vom 9° 52' N., 8° 53' E.
 Kano 12° N., 8° 17' E.

Ten Sedge Warblers Acrocephalus schoenobaenus ringed in Kano in previous winters were also controlled in Kano and one ringed in Ibadan the year before was controlled there.

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WAZA, CAMEROUN - ACCESS AND AVIFAUNA

by

F.J.Mundy

I visited Waza National Park, Cameroun, for two days in late December 1971, and I fully agree with Fry's opinion of the area as of "exceptional ornithological interest" (BNOS 1970, 7:1).

It is easy to get to the Park as there is a good road from Maiduguri through Bama and Mora, some half of which is tarred. The officials along this road are obliging and it is not even necessary to have a Cameroun visa as one can be obtained in Mora. In contrast, several people I know have had trouble at the more southerly border post near Mubi.

Waza camp is pleasantly situated and the facilities offered are standard except that when I was there the catering was very poor (and very expensive). It costs 1,200 francs per person, either West or Equatorial Africa currency, to enter the Park and the ticket is valid for one year. One cannot enter without a guide, the charge for whom is

at least 500 francs per day. Many of the tracks inside the Park are easily negotiable in an ordinary car at this time of year.

It is unlikely that anyone would stay at Waza for a long period or visit it many times unless one were working there, and so as Fry says (op.cit) it is worth placing on record even a very few days' observations. Although I visited the place about a month later in the dry season there are many differences between my records and Fry's, and between ours and Broadbent's (BNOS 1971, 8:58). Indeed, Broadbent, in March, saw 18 species not seen by either Fry or me in November/December.

Some of my records come from the extensive marsh outside the Park proper, in which case (marsh) is placed alongside that record. This area is hunted by people visiting Waza.

Ostrich Struthio camelus: group of 10, including at least 2 mature males.

Long-tailed Shag Phalacrocorax africanus (marsh): 2 all-black birds.

Purple Heron Ardea purpurea (marsh): about 20 standing singly.

Little Egret Egretta garzetta (marsh): group of 5.

Squacco Heron Ardeola ralloides (marsh): single birds all over

Openbill Anastomus lamelligerus: group of 4 at a water hole

W.Afr.Hadada Bostrychia hagedash (marsh): group of 8.

Garganey Anas querquedula (marsh): hundreds feeding in the rice and only seen after a gun shot.

White-faced Duck Dendrocygna viduata: a tight group of 200 at a water hole.

Knob-billed Goose Sarkidiornis melanota (marsh): small gaggles totalling about 100 birds constantly flying to and fro.

Spurwing Goose Plectropterus gambensis (marsh): at least 200 in small gaggles flying around constantly. I never saw the 2 geese' species mixing.

White-backed Vulture Gyps bengalensis: about 20 seen, and 3 pairs nesting in trees at 40 ft. height.

Rüppell's Griffon Gyps rüppellii: about 15 on the small inselberg at the Park's entrance and nesting there.

Brown Harrier Eagle Circaetus cinereus: 1

Red-tailed Buzzard Buteo auguralis: 1

Blue-cheeked Bee-eater Merops superciliosus (marsh): group of 5 on the edge.

Ant Chat Myrmecocichla aethiops: group of 3.

I did not see any pelicans, nor did I see any Grey Heron Ardea cinerea. In Sokoto (at 13°N, Sokoto is a little to the North of Waza's latitude), the Grey Pelican Pelecanus rufescens is present in the dry season and disappears usually in late February/early March. Its presence at Waza in late March (Broadbent op.cit.) is interesting. The Grey Heron can be seen on the Sokoto rivers throughout the year and

is occasionally abundant there.

I am surprised at Broadbent's record of a Palm-nut Vulture Gypohierax angolensis. It is certainly a migratory bird at Sokoto having been seen only in September and October (i.e. at the end of the wet season), and I emphasise that it is regular in its arrival and presumably in its departure. Also, the Swallow-tailed Kite Elanus riocourii is a visitor to Sokoto, appearing from late November to early February. I did not see any at Waza.

Neither did I see any Turtle Doves Streptopelia turtur which were recorded in such numbers by Fry.

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SOKOTO PROVINCE

(4) Excluding the Sokoto Town area

by

P.J.Mundy & A.W.Cook

The Province is large, 36,500 sq.miles in area, and approximately rectangular in shape, placed between the northerly coordinates of 14° and 11° 30' and the easterly coordinates of 3° 30' and 7°. Hence it lies almost wholly within the Sudan savanna belt, although at its southernmost limit it merges into Northern Guinea savanna. Annual rainfall varies from 500mm (=20") in the north to about 1000mm (=40") in the south of the Province, producing a range from north to south of 7 to 5 months respectively with less than 25mm of rain each month (for details see Elgood, Sharland & Ward, 1966, Ibis 108:86-88). Sokoto town itself, for instance, received 630mm (=25") of rain in 1970 and 473mm (=18.6") in 1971 (figures by courtesy of the Met.Office, Sokoto).

It should not be thought however that the Province presents a uniformly arid appearance. There are several east-west rivers that, although drying up superficially in the long dry season, yet maintain a subterranean flow sufficient to support some lush vegetation. Moreover, there are several lakes in the far north, that at Wurno having been described twice before (Pedler 1970, BNOS 7:59; Mundy & Cook 1971, BNOS 8:42). And there is the River Niger itself, along the S.W.boundary of the Province.

Generally, of course, most of the Province is covered with the typical Sudan savanna vegetation - i.e. several different kinds of shrubs and trees, quite widely spaced with very little development of undergrowth. Acacia spp. predominate, and around Sokoto the species A. alba is the commonest. A good proportion of the Province, with its characteristic dry acacia woodland has been formally enclosed

as Forest Reserves. this should mean no hunting and no livestock intrusion. Some of this does occur, but it can be said that these natural woodlands are little disturbed by man or his beasts. Consequently such places would make most interesting ecological study area; as yet we ourselves have paid very little attention to them.

The human population of Sokoto Province numbered nearly $4\frac{1}{2}$ million in 1963 (Official Census), producing an average density of 120 persons per sq.mile; but the population is undoubtedly concentrated along the rivers, and especially the River Sokoto in its long arc through the Province from S.E. (i.e. Chafe 12°N , 7°E) to S.W. (on the River Niger near Kaoje $11^{\circ}25'\text{N}$, $4^{\circ}15'\text{E}$). These figures indicate that the human impact on the avifauna in the "bush" must yet be quite small - but contrast this with the modern situation around Sokoto (Mundy & Cook in prep.), which, being the State Capital, now has a population approaching 200,000; that is about 4% of that of the Province.

In summary then, Sokoto Province is a vast and largely unexplored part of Nigeria, ornithologically speaking. We have identified 23 species in the Province, not found within the Sokoto town area (arbitrarily taken as that area circumscribed by a 25 mile radius from the town), but have already reported on 6 of these species occurring on Kotorkoshi inselberg, being the only place we have seen them (Mundy & Cook, 1971, BNOS 8:46). Inselbergs, incidentally, are a characteristic sight in the Province.

Hammerkop Scopus umbretta seen at Maru ($12^{\circ}15'\text{N}$, $6^{\circ}30'\text{E}$), where it nests by the side of the River Sokoto.

Rüppell's Griffon Gyps rüppellii known only from Kotorkoshi inselberg where it nests during the dry season. The "bush" areas to the east and west of the main Sokoto-Zaria road are known to contain elephant, pig and antelope and no doubt this vulture finds its food there, if not further afield. During March 1972 we scaled the rock and A.W.C. was lowered by rope down the front face to one of the nests. He obtained good colour photographs of the single chick, which was healthy and unafraid; it tried to keep itself in his shadow. Meanwhile the adult flew agitatedly to and fro, returning to the nest shortly after A.W.C. began the ascent.

We wish to thank Mr.S.Diamond of the Advanced Teachers' College, Sokoto, for helping us in that climb.

It is necessary to mention here that the Griffon has been reported nesting in Senegal in December, when 2 nests were found each holding one chick (Morel & Morel 1962, Alauda 30, the list at p.256). No other details were given. This observation is the first confirmed breeding record of the Griffon in West Africa; our own previous statement was in error (Mundy & Cook 1972, BNOS 9:9).

Bateleur Terathopius caudatus seen only once in the far west of the

Province near Kangiwa ($12^{\circ}35'N.$, $3^{\circ}50'E.$). Bannerman reported it as common (vol.1, Birds of Tropical W.Africa).

Brown Harrier Eagle Circus cinereus seen at least twice: once about 30 miles to the south of Sokoto in the Forest Reserve, and a second time near Kangiwa.

White-headed Plover Vanellus albiceps seen at Maru and occasionally at the many pools along the road towards Sokoto. Usually solitary. This approximate latitude of $12\frac{1}{2}^{\circ}N.$ seems to be the northernmost limit of its range; Dobbs saw it only twice in Sokoto during 9 years (Nigerian Field 1959, vol.24 p.III).

Red-eyed Turtle Dove Streptopelia semitorquata: the furthest north that we have positively identified this species is at Lake Natu ($12^{\circ}40'N.$, $5^{\circ}55'E.$). We have never seen it around Sokoto, though often specifically checking for it. The habitat at Lake Natu is farmland with some patches of woodland, but otherwise open country (see Grimes 1971, BNOS 8:61). Bannerman (Birds of Tropical West Africa, vols. 2 and 8) and Mackworth-Praed & Grant (1970, Birds of West Central and Western Africa) disagree considerably over this bird's northern limit, drawing it much further south and north of Sokoto respectively. Dobbs (op.cit.) never saw it in Sokoto.

Long-tailed Parakeet Psittacula krameri resident at Maru where it no doubt breeds; also seen regularly at Lake Natu, but no further north than that. Hopson saw this bird at Malamfatori, latitude $13^{\circ}33'N.$ (1965, BNOS 1,(4):7).

Blue-naped Mousebird Colius macrourus sometimes seen at Maru and then often feeding in desert date trees, Balanites segyptiaca.

Rufous-crowned Roller Coracias naevia seen throughout the Province but always around Talata Mafara ($12^{\circ}30'N.$, $6^{\circ}05'E.$) and Argungu ($12^{\circ}40'N.$, $4^{\circ}35'E.$), and the nearest to Sokoto being 30 miles to the S.E. (latitude $12^{\circ}40'N.$). We have not seen it to the north of Sokoto, and again Dobbs (op.cit. p.116) only saw it 3 times during 9 years in Sokoto.

Broad-billed Roller Erythronus glaucurus seen only once at Maru (cf. Serle 1943, Ibis 85:414).

Guinea Wood Hoopoe Phoeniculus purpureus occasionally seen in the Forest Reserves to the south of Sokoto in which town, unlike Dobbs (op.cit. p.116), we have not seen it.

Giant Kingfisher Ceryle maxima seen once on the River Sokoto at Gusau ($12^{\circ}05'N.$, $6^{\circ}50'E.$), and once at Maru.

Red-throated Bee-eater Merops bulocki resident at Bungudu gorge (halfway between Gusau and Maru) on the River Sokoto, and Lake Natu, but not seen further north.

Red-rumped Swallow Hirundo daurica resident at Bungudu where it seems to nest; our notes agree exactly with Bannerman's (vol. 5, 252).

Sooty Ant-chat Myrmecocichla nigra seen only once, 30 miles S.E. of Sokoto (approximately 12° 40' N., 5° 05' E.), a male in woodland. As this seems to be its furthest extent westwards, the observation needs confirmation. (Mackworth-Praed & Grant, 1955, The Birds of E. & N.E. Africa, 284.)

Long-crested Helmet Shrike P. rionops plumata seen several times at Maru in small flocks

Lavender Firefinch Estrilda caerulescens resident at Maru near the river where it congregates into small flocks.

Black-faced Firefinch Estrilda larvata seen only once, with a group of Lavender Firefinch at Maru.

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THE RED-EYED DOVE *Streptopelia semitorquata*

IN SIERRA LEONE

Grimes (1971, BNOS 8:31/32) asks for information on the distribution of the Red-eyed Dove. In Sierra Leone it is ubiquitous outside the forest. In the grass woodlands of the northern part of the country it vies with *Streptopelia vinacea* for the status of commonest dove; in the huge areas of farm bush which cover most of southern Sierra Leone it shares the position with *Turtur afer*; in the mangrove belt along the coast it is certainly the most common species, as also in the sandy coastal savanna and lake/river system of the extreme south. From the closed forest, however, it is virtually absent. I have never recorded it in the Peninsula forest at Freetown though it occurs sparingly in forest edge conditions. At Kasewe, 70 miles east of the Peninsula, it occurs regularly in the secondary planted forest which is broken up by clearings, but not in the remaining closed forest. In the

Kambui Hills, another 70 miles eastwards, it comes right to the forest edge and I have a nest record from the Rest House garden literally 20 yards from the start of the unbroken forest. 25 miles further to the south-east lies the Gola Forest stretching to the Liberian frontier, the largest and oldest of the remaining forests of Sierra Leone. Here, as the forest is felled and farms set up, so immediately does the Red-eyed Dove establish itself, and it also invades the half-felled areas interspersed with clearings. At one point a logging road has been driven some 7 miles through true forest and I have found the bird at the end of this road but I assume it was attracted by the forest edge conditions which obtain along the road itself with its thick side growth of Musanga, Harrungana, and Macaranga. (An even more unlikely record from this same area was a Whinchat Saxicola rubetra.) Its distinctive call precludes any possibility that it could be overlooked in the forest canopy, and I think it fair to summarise by saying that the Red-eyed Dove does not occur naturally in the Sierra Leone forests except where these have been tampered with by man.

G.D.Field.

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MALLAM FATORI REVISITED

by

R.E.Sharland

I visited Mallam Fatori between March 14th and 19th, 1972, together with Philip and Francis Hall. The two reed huts built by the Society for R.J.Dowsett are still in excellent condition and although we could have used the Forestry Rest House, the acting Director of the Federal Fisheries Research Station kindly allowed us the use of one of the houses, which was a great help.

I found that the lake shore had receded about 100 yards since I was last there in 1969. I could not obtain precise levels from the Research Station but the falling level of Lake Chad coupled with plans to dam and divert one of the tributaries of the Shari

River must be a serious matter for the Chad Basin Commission to consider and may have, in time, a great effect on the fish and fauna of the area.

We found that the *Salvadora* inside the Research Station had all been cut down and the area had not been replanted. This meant that we had to go further afield to net Palaearctic migrants. We found three patches of low *Salvadora* about one quarter of a mile from the area previously used and put up five nets. In just over four days we caught and ringed 206 migrants; considering that we had only about half the usual net-length in use it would seem that the volume of passage was similar to that of previous years.

We ringed very few Ethiopian birds. We found that, apart from Golden Sparrows *Passer luteus* which were far more numerous than in 1968 or 1969, few Ethiopian birds were in the *Salvadora* (only four Diochs *O. quelea* were caught and they were trapped on the shore). Three birds ringed in 1967 or 1968 were controlled - a Long-tailed Nightjar *Caprimulgus climacurus*, a Common Bulbul *Pycnonotus barbatus* and a Slender-billed Weaver *Ploceus luteolus*. The body of a Cordon Bleu *Estrilda bengala* was also given to us; this bird had been caught and ringed on 29.12.71.

For two days midges were very prolific on the shore line and Sand Martins *Riparia riparia* were consequently very numerous. Just as we were about to try to catch Sand Martins by flicking the midge hatch ceased and the birds became very few.

We visited the mouth of the River Yobe twice and stayed until dusk on our last evening. We found plenty of papyrus swamp but no reed beds at all. We had imagined that we would see vast numbers of Wagtails *Motacilla* and Sand Martins flying into roost but actually saw even less than we had seen at Mallam Fatori.

At the mouth of the River Yobe we saw a dark phase Wahlberg's Eagle *Aquila wahlbergi* and flying over Mallam Fatori next day saw another - this time a light phase with all the underparts practically pure white. This Eagle has been seen at Geidan by R.E.S. and at Poriskum by Blasdale.

We tried to catch waders, Sand Martins and Wagtails on the shore line but with very little success. Ruff *Philomachus pugnax* were as plentiful as usual.

Palaeartic migrants ringed were:-

Marsh Sandpiper	<i>Tringa stagnatilis</i>	1
"Flava" Wagtail	<i>Motacilla flava</i>	10
Redstart	<i>Phoenicurus phoenicurus</i>	2
Sedge Warbler	<i>Acrocephalus schoenobaenus</i>	8
Reed Warbler	<i>Acrocephalus scirpaceus</i>	17
Olivaceous Warbler	<i>Hippolais pallida</i>	3
Blackcap	<i>Sylvia atricapilla</i>	1
Whitethroat	<i>Sylvia communis</i>	124
Lesser Whitethroat	<i>Sylvia curruca</i>	32
Subalpine Warbler	<i>Sylvia cantillans</i>	6
Willow Warbler	<i>Phylloscopus trochilus</i>	2
		<hr/> 206 <hr/>

We could not see any *Typha* beds anywhere between Mallam Fatori and the Yobe. There is plenty of *Salvadora* on the "road" from Kukawa to Mallam Fatori but any future ringing at Mallam Fatori will be difficult unless the *Salvadora* there is preserved. I hope that the Forestry Department will take steps to protect this.

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THE NESTS OF THREE FOREST BIRDS

In the past year, I have observed the following 3 nests at Igot Ibritam, A bak Division, S.E.State, Nigeria (4°46'N., 7°35'E.). The first is described by Bannerman (1953, *Birds of West and Equitorial Africa*), but no date is given. The other two are said to be unknown.

1. Chestnut Wattle-Eye *Dyaphorophia castanea*:

On 26th May, 1972, a schoolboy showed me a nest of this species in a cassava patch among oil palm trees. The nest was 1 ft. above the ground in a small shrub with large soft leaves. It consisted of a very neat, deep, funnel-like cup made of dried grasses and small stems. The rim was lined with a white silken material (spider web?) to help attach it to two surrounding leaves and to bend down a leaf above it, thus partly hiding the nest. The two fresh eggs were very light blue, with dark brown spots, especially at the thick end. Egg measurements were 16 x 12 mm.

2. Slate-breasted Forest Warbler Apalis rufogularis:

On 10th June, 1971, I found this bird's nest in a Gmelina tree in our garden, 18 feet above the ground. The nest was constructed of small twigs, in the shape of a shallow cup. The bird was sitting on the nest. But one week later the nest was abandoned, and on investigation no eggs were found. This bird and its mate frequent our garden and the thickets nearby. Their plaintive whistles "whee whee---oo, whee whee---oo", call attention to them.

3. Buff-throated Sunbird Chalcomitra adelberti:

On 27th January, 1972, I found a nest of this sunbird 7 ft. above the ground in a small mango tree in our garden. The nest was a rather untidy dome, 10 x 10 in. of woven grass stems, with a 2 x 3 inch opening in the side. On closer examination it was found that the nest was lined with plant down. The four white eggs measured 18 x 12 mm. In early February 1972, a schoolboy showed me another, similar nest, in a raphia palm, 15 ft. above the ground.

Hernan H. Gray

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EDITORIAL

This issue sees the beginnings of two very comprehensive works from the far north of Nigeria, one from the west (Sokoto) and the other from the east (Plains of Lake Chad); both these papers will appear in three parts. This Bulletin also carries an appeal for information on the Crowned Crane which I sincerely hope will attract a good response from ornithologists in West Africa.

Members may have noticed that we have lost the Crowned Crane from the front cover of the Bulletin. We will try our best to recover it when we have used up the present "birdless" stocks!

Finally, the overgreen request for members who have not yet paid their subscriptions for 1972 to do so, either into our U.K. account (see previous numbers) or in Nigeria to Allan Cook in Sokoto.

Roy H. Parker

.....

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THE BIRDS OF SOKOTO

Part 1: Introduction and Non-Passerines

by

P.J.Mundy and A.W.Cook

Introduction:

Sokoto town, 13°02'N. 5°16'E., lies at the confluence of 2 rivers, the Rima and Sokoto, both of which now maintain flowing water throughout the year because of small dams thrown across them. Sokoto has been a thriving town since it was built up from 1809 by Shehu Usman dan Fodio, the "Sarkin Musulmi", and its site is a favoured one, well-watered and of commanding height. Since 1968 the town has experienced a boom due to its modern position as a State Capital: the population is approaching 200,000 and semi-official estimates put the current density of the surrounding 2,500 sq.miles at about 400 persons per sq.mile (about 160 per sq.kilometre), compared with 120 per sq.mile (=47 per sq.kilometre) for the Province as a whole. A considerable part of the neighbouring landscape therefore shows the impact of this population pressure, and of the accompanying grazing pressure from the thousands of domestic animals. In brief, the landscape is flat and "sandy", with very widely spaced trees and shrubs, producing a much barer view than that generally associated with Sudan savanna, within which vegetational belt almost the whole Province lies.

In this overall view there is some, if little, habitat variety. Laterite outcrops occur everywhere and occasionally break out into groups of low hills, one such at Kalambaina being a study area (see later). There are a number of woodlands: for example, mixed woodland (predominantly palm and along stream courses), Neem plantations and Forest Reserves; the most pleasant of which was undoubtedly that area around the Senior Service Club before development began. Neem plantations are strictly functional and though monotonous are worthy of study in their own right. The Neem tree *Azadirachta indica* is a recent introduction from India (Radwanski 1969) and it is clear that many of the indigenous organisms are not adapted to it (as one would expect) and in particular these plantations suffer from a poor representation in bacteria, insects and birds. This habitat is bound to change, for the Neem is an invader and it and its environment will slowly become ecologically adapted together.

The rivers, lake Kware and the new lake at Wurno provide rich areas of mixed habitats; we have previously described most of the avifauna at Wurno (Mundy & Cook 1971 b). Finally there is at Sifawa an unusual and interesting area of low-lying lateritic hills well clothed in shrubs and

with occasional trees that merges into sandy farmland dissected by erosion gullies. One-fifth of the bird species here are ploceids.

Study Areas:

We adopted a 25 mile radius from the town as a limit to the "Birds of Sokoto" simply because that was a maximally accessible distance for a morning's or evening's bird watching of 3 hours. Within these 2000 sq.miles we chose 9 areas for special study each averaging 1 sq.mile in size, and we aimed to visit all of them once every month to assess the occurrence and abundance of birds. Due to annual home leave we have no records for May and very few for April, but over the rest of the years 1970 and 1971 we paid 150 visits to the field, both morning and evening and of 3 hours' duration each visit. During 1971 we also spent a lot of time in certain of the areas studying a small number of species and incidental observations were then recorded. We made occasional forays to other places (e.g. Amanawa, Lake Kware).

In total our present conclusions arise from about 1500 observer-hours throughout the year within 25 miles of Sokoto town.

The 9 study areas were -

- (a) Lake Wurno: open water, riverine, fadama and farmland habitats.
- (b) Sokoto river: ditto, except no lacustrine.
- (c) Rima river ditto.
- (d) Sokoto/Rima confluence (near Cement Factory): ditto, a smaller area.
- (e) Club woodland: well-drained woodland of 60 years' age, with mahogany Khaya senegalensis and silk cotton Ceiba pentandra dominant, many shrubs. Surrounded by farmland.
- (f) Marmaru woodland: mixed woodland along a stream course, dominated by palms Borassus, Raphia, Elaeis and mahogany. Very thick undergrowth. Surrounded by farmland. A large Neem plantation adjoins.
- (g) Majiya woodland: mixed woodland along a stream course, but not so wet as (f), dominated by palms Borassus, Raphia, mahogany and Ficus spp. Very thick undergrowth. A large Neem plantation and a small Forest Reserve adjoin.
- (h) Sifawa scrub: see Introduction: a water-hole for much of the year.
- (i) Kalambaina hills: see Introduction: almost bare of vegetation with hills rising 100-200 ft. above surrounding farmland.

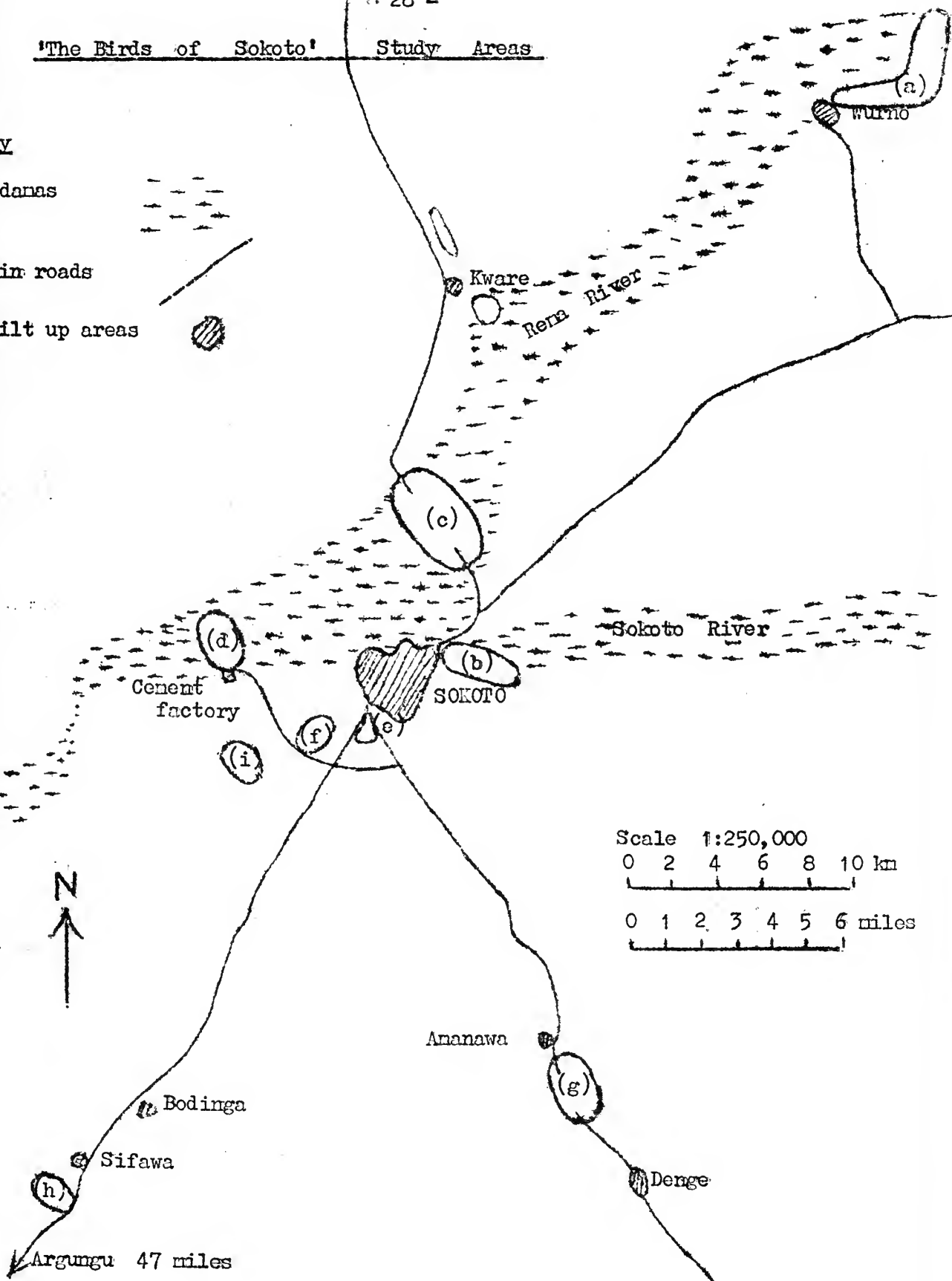
'The Birds of Sokoto' Study Areas

Key

Fadamas

Main roads

Built up areas



These areas have been marked on the map, along with other localities mentioned in the text. The bird species distribution has been accurately plotted and is designated by (a)(b) etc. Forest Reserve ("mature savanna" in Fry 1966) was the only habitat not examined. We recorded the calls of several species on a Phillips' portable cassette tape recorder and this is indicated by (rec).

Census Problems:

It is one thing to plot the occurrence and distribution of bird species, but quite another to assess their abundance. There are 4 main types of behaviour of a bird and all gradations in between - solitary to gregarious, secretive to conspicuous. Very few species have constant behaviour: the Chanting Goshawk Melierax metabates for example is solitary and conspicuous throughout the year, the Cordon Blue Estrilda bengala gregarious and conspicuous. Most species have changing patterns of behaviour: the Grey Plantain Eater Crinifer piscator is gregarious and conspicuous in its own right but may show long periods of cryptic behaviour whilst feeding quietly or resting in the tops of the tallest trees. Weavers are the most obvious example, many being gregarious and conspicuous for only 4 months of the year around Sokoto, and then moulting into unidentifiable "small brown birds". One or two species even render themselves as conspicuous as possible by following an observer around, e.g. Black Kite Milvus migrans.

Generally acceptable censusing methods are exacting though possible: usually an area is taken commensurate with the size of animal to be counted, and then strictly regular visits and censusing are adopted. Both these criteria are difficult and we have not attempted them. Even so, we have been able to build up slowly a composite picture of the abundance of our birds, from the number of eagles in a large area to the number of shrikes in a small area. For many birds, of course, netting could provide a yardstick, though the results have to be interpreted with caution (see Fry 1970).

For these reasons, we would criticize Fry's system of indexing (Fry 1966, pp.345-6), while yet admitting that some sort of rationalization is necessary. With our own "sighting" method we have substituted numbers as far as possible for the naturalists' subjective terms "abundant", "common", etc. and have always chosen the lower estimate for the minimum number of birds present in an area. (For us, a "sighting" is a sight of one bird on one day). The aim of any field session is to find all the species present and consciously or not one looks harder for the secretive birds than for the bolder types. But whether a bird is being bold or secretive on a particular day makes little difference to our method: it counts simply as one sighting.

We can use the Great Spotted Cuckoo Cinador glandarius as an example. During 1971 we sighted the bird 16 times, and bearing in

mind the frequency of our excursions this is a very low number; this species is at times secretive and at other times highly conspicuous. Fry (1966) calls the bird "conspicuous" with a rating of 2 (a compromise?) and produces a total index of 4 from a maximum of 160 (given to a maximally secretive bird that obtrudes itself everywhere). Unfortunately, in terms of actual numbers of the cuckoo, this index means nothing to us, and prospects of an estimate worsen if one thinks of the species as one-fortieth as abundant as a hypothetically secretive and common (3 or more records per hour) bird! We think our statement of 16 sightings in one year around Sokoto is a more realistic estimate of abundance, though by implication, than an index of 4.

For several species we have plotted their total monthly sightings and suggested certain movements from the figures (e.g. Black Kite), and have been able to compare resident and migrant populations (e.g. Hoopoe Upupa epops).

Diversity:

To date (March 1972), 320 spp. have been recorded in Sokoto Province, of which 284 or 89% have been seen within 25 miles of Sokoto town. Parts 1 and 2 follow with our own observations on 232 spp.

Our general study area around the town, let it be remembered, is the most highly populated part of the Province, yet we still find 90% of the Province's bird variety here. Superficially it seems that the human's and their animals' impact upon the avifauna has been slight. There must of course be an impact - large areas given over to crops for the wet season, laid bare during the dry season and suffering considerable wind and water erosion; clearance of woodland undergrowth for firewood; the domestic goat preventing natural regeneration over fallow areas and inadvertently aiding the spread of the Neem tree (which is somehow resistant to goat cropping). We suggest that the impact is visible more in a reduction or increase in many species' abundance than in a reduction in the total avifaunal diversity.

Our 2000 sq.miles is now rather a patchwork of habitats than simply the natural Sudan savanna with river and marsh, with a consequent increase of "edge effect". Additionally the natural climax stability has been broken and no one community of birds is continuously favoured but instead smaller populations of more species may be supported. The Sussex weald as an alternative to the climax oak woodland is perhaps analogous.

The Falconiformes is one group however that must have suffered a reduction in diversity. For example, all the 6 species of West African vulture have been seen in Bornu Province and close to Maiduguri, which is a broadly similar area to ours; only 2 species are known from Sokoto Province.

Acknowledgements:

To our wives, for help of various sorts: Mr. R. Lister for field help during 1970. Mr. R. Parker for help in certain identifications; Dr. J. Broadbent for details of his visit to Wurno in April 1971.

List of Non-Passerines:

Species' nomenclature and sequence follow White's Revised Check-List of African Birds; colloquial English names follow Bannerman (1953). References to other works cited are placed after Part 2.

African Little Grebe Podiceps ruficollis: September to March on pond at (f), in July on open water at (b). Breeding in dry season at (f) (see Part 3) and then with its young becoming very conspicuous as they dive and play in the water. 3 birds in July, 4 adults and 8 young at (f). Not clear why it should leave its breeding area in the wet season. Serle (1943) found them breeding at Gwadabawa in July and August.

Pink-backed Pelican Pelecanus rufescens: Breeds in Sokoto town August to February (Part 3) and present at (a)(b)(c)(d), but seen in large groups only on 3 occasions: 33 in October at (c), 50 passing over (d) in December, and an unprecedented 150 wheeling around near (f) in December. Also said to be seen at (a) in July by hunters and at Sokoto by Dobbs (1949). At least 50 breeding birds in Sokoto, and not known to breed elsewhere in the area in 1971/72. Although clearly a migrant, we are still unresolved as to where it goes, but presumably to the great rivers or lake Chad. Very regular in its arrival (about August 1st) but less so in its departure, from February onwards to April (Serle).

Long-tailed Shag Phalacrocorax africanus: Throughout the year at (a)(b)(c)(d), and at (f) in August to October. Sometimes in large numbers, 50 being seen at lake Wurno in November, and even up to 10 together around the pond at (f), but usually in groups of 2-6. Mostly immature birds seen (i.e. varying amounts of white underneath), but 26 sightings of "all-black" birds from July to October, and breeding inside the town in September (Part 3). Its occurrence at (f) indicates that small areas of open water may still satisfy it.

African Little Bittern Ixobrychus minutus: Seen singly at (a) in March and July. An inconspicuous bird found in thick stream-side vegetation, and doubtless resident.

Night Heron Nycticorax nycticorax: A large roost in the palms of (f), November to March, up to 50 birds with perhaps $\frac{1}{2}$ to $\frac{2}{3}$ of these immatures. Also smaller groups at (b) in June and October, and (c) in April, September, October, appearing only at dusk though they may begin their wheeling over the roost site some 2 hours before sunset, and then they make a certain amount of honking (100). Definitely absent from (f)

during the rest of the year and seemingly in much reduced numbers from May to August. Dobbs (1959) found them in the same palm woodland from November to May and she (1949) only failed to see them from July to September.

Squacco Heron Ardeola ralloides: Seen throughout the year in all fadammias and other marshy areas, and at (f) in February and March. The highest numbers are recorded during the Northern winter and are presumably migrants. more than 100 being seen at (a) in November for example. Not often a conspicuous bird until they fly. Usually solitary but occasional flying groups up to 8.

Cattle Egret A. ibis: Very numerous throughout the year, and a breeding colony within Sokoto town in the wet season. (Part 3). Feeds in all our areas and not by any means always with domestic animals. Roosts in trees in (b)(c) and sometimes on the town's edge.

African Green-backed Heron Butorides striatus: Throughout the year at (a)(b)(c)(d)(f)(g), and breeding at (f)(part 3). Always solitary except when breeding, and generally well camouflaged.

Black Heron Egretta ardesiaca: Seen twice - a roosting group of 100 birds at (a) in August, and a pair at (c) in October. On both occasions with cattle egrets.

African Great White Heron E. alba: Resident, and seen at (a)(b)(c)(d), but mostly at (c) due to the wider area and deeper water. Generally single birds, but a loose group of 20 at (a) in March and all with yellow bills. No more than 1 bird in 10 has any black in its bill.

Little Egret E. garzetta: Seen at (a)(b)(c)(d), and 1 bird at (f) in October. Our sightings per month throughout 2 years are: 14, 18, 33, 60, - (observers absent), 4, 4, 0, 41, 109, 3, 11. It seems therefore to move away from our area to breed during the wet season, though we have seen single birds with breeding plumes passing through in July and September (photographed; the red eye and green "face", between eye and bill, is distinctive). The sightings also indicate palearctic migrants on passage - groups of 20 to 50 are seen in April, September and October (Serle saw a group of 12 in June). Always feeding in water. solitarily or in small groups.

Grey Heron Ardea cinerea: (At first confused with A. melanoccephala). Only seen at (a)(b)(c)(d). large loose groups appearing in September, October, November, March up to 50 birds. Very small numbers in the wet season, if seen at all. The best means of field identification is the underwing - grey in this species and black-and-white in melanocephala. Always in water.

Black-Headed Heron A.melanocephala: Resident at (a)(b)(c)(d). Usually in small numbers and solitary, only once exceeding cinerea in numbers: 50 at (a) in March. Once seen standing in a field, otherwise in water. A one-footed bird (complete tarsus but no toes) was seen regularly at the pond at (f) from May to September. A heron once mobbed us. Unlike Serle, we have no evidence of this species breeding.

Purple Heron A.purpurea: Generally absent in the wet season though seen at (a) in July and August. Very small numbers at (a)(b)(c), but 30 birds at (c) in September, and 10 each at (a) in November and March. Hence probably palearctic migrant.

Abdim's Stork Ciconia abdimii: Seen from the end of June to the end of October and usually flying over the area. Breeding to the south (Mundy & Cook 1971 b) but not known to breed near Sokoto now (Serle recorded it breeding at Gwadabawa). Regular in its arrival. On October 29 1971 we saw a compact group of 50 birds flying northwards towards Sokoto in the evening, then abruptly turning and flying south. Sometimes seen singly at little ponds in fields, catching toads.

Open-Billed Stork Anastomus lamelligerus: Seen only at (a) in January (50 birds), February (5) and March (3). Always grouped. In view of this species' migratory behaviour (Bannerman), Dobbs' "all the year round" statement (1959) is surely unreliable. She (1949) saw it only in March, April and December in 1948. The Open-Billed Stork has a conspicuous and distinctive stance.

Marabou Stork Leptoptilus crumeniferus: Seen at (c) in February (1 bird), inside the town in March (breeding, 5 nests), at (b) in September (a pair) and at (c) in December (a pair). Dobbs (1959) recorded it breeding in the town; we did not find it there until March 1972. This bird is conspicuous, so where did it feed during its breeding period? It certainly disappears during the wet season. Always in water, and never seen with vultures at carcasses - a well known habit.

Wood Ibis Ibis ibis: Breeding with the Pelicans in Sokoto town, August to February, during which time they are seen in small groups at (a)(b)(c)(d), but 40 birds at (a) in July and 24 at (b) in September. Dobbs (1959) has a misprint. Toads are a part of their diet.

Sacred Ibis Threskiornis aethiopica: We have not found it breeding within or near Sokoto Town (cf. Serle), but one bird was seen carrying nest material towards the town in July. A sporadic occurrence during the year; not seen at all in August and September, large groups at (a) in January (60 birds), April (25, Broadbent pers. comm.) and November (40) in much smaller groups or even pairs occasionally at (b)(c)(d).

West African Hadada Bostrychia hagedash: Of sporadic occurrence during the year; not seen in April, June and August, group of 50 birds at (a) in November, smaller groups of 6-10 occasionally at (a)(c)(d). Always in marshy areas with thick vegetation, and thus usually seen only when they fly and easily confused, we feel, with the Glossy Ibis. Neither Dobbs nor Serle recorded the Hadada, though they both saw the Ibis, sometimes in large numbers. Possibly our own record of 50 was of the Ibis.

Glossy Ibis Plegadis falcinellus: (see Hadada). One bird at (f) in September.

Fulvous Duck Dendrocygna bicolor: Generally in small numbers at (a)(b), but a group of 30 at (c) in March, 25 at (c) in April, 50 at (a) in November. Not seen in February, June and December.

White-Faced Duck D.viduata: Much more common than the Fulvous Duck, being found on (a)(b)(c)(d) regularly except December, January and April. Groups of 100 at (b) in June and at (a) in July, group of 150 at (b) in October. Otherwise in smaller groups of less than 20 birds. Our sightings indicate a definite dispersal from the area during the dry season. Never seen feeding in the day. but always clustered together.

Egyptian Goose Alopochen aegyptiaca: Seen only at (c) in February (1 bird), at (a) in April (20, Broadbent, pers. comm.) and at (a) in July (30). Dobbs recorded it as "rare".

Spur-winged Goose Plectropterus gambensis: Throughout the year at (a) (see Mundy and Cook 1971 b) and odd birds at (b)(c)(d), with a group of 25 at (c) in September. Attracted to wet grassy areas.

Knob-billed Goose Sarkidiornis melanota: Seen more often than the Spur-winged Goose at (a)(b)(c)(d) and sometimes in groups of 30-50. Attracted to small pools. Absent for months from any one place, and overall its numbers are lowest from August to December.

Pygmy Goose Nettapus auritus: Generally in pairs at (a)(b)(c)(d) in the wet season and also a pair at (b) in January. No evidence of breeding but 10 pairs seen on a pool at (b) in July. Always swimming on open water.

Pintail Anas acuta: Seen at (a) in January and November, groups of 4 and 10. Very scarce in both seasons 1970/71 and 1971/72.

Hottentot Teal A.hottentota: A single bird "unconcernedly" swimming on a pool at (c) in March.

Garganey A.querquedula: Much the commonest duck in both seasons at Sokoto, from late October to late March. Occurring at (a)(b)(c)(d)

during these months. its favourite place being the large lily-covered pools of (b) (see the 2 "lakes" on map II of Dobbs 1959), groups of 150 in October, 500 in February and 200 in March there.

Ferruginous Duck Aythya nyroca: Seen twice, at (d) in January (14 birds) and (b) in October (6) in 1970/71; none in 1971/72.

Hooded Vulture Neophron monachus: Very numerous, resident mostly around human habitation. Breeding begins in October and eggs may still be laid in March (Part 3). The immature birds are recognised by the black down on the head and neck, in place of adults' white down; immatures may comprise one-half of roosting groups in the breeding season. The total population is probably between 1000 and 2000 (Mundy & Cook, in prep.). Once, 300 vultures were seen in a thermal in March.

Palm Nut Vulture Gypohierax angolensis: One bird at (f) in late September and flying over (e) on October 3rd. Dobbs (1949) saw it from late July to late October, but later (1959) described its occurrence as "regular". It certainly does not occur here outside the wet season.

Pale Harrier Circus macrourus: "Ringtail" harriers are seen from early November to late April, effortlessly quartering low over the ground at (a)(b)(c)(d)(h)(i). They are conspicuous, yet only 2 males have been seen out of 23 sightings, and those in December and February. We would expect at least one-sixth to be males (full male grey plumage coming in the 3rd year, Witherby et al, 1943) on a random dispersion. Perhaps some of these 23 sightings are of Montagu's Harrier C. pygargus, though the proportion of males should remain at one-sixth or higher. Males of both species were seen in equal numbers at lake Chad in 1961/62 (Elgood et al, 1966).

Generally 1 or 2 birds are seen at any one time, but 6 at (a) in January, and a pair of these "dancing" in the air together.

Marsh Harrier C. aeruginosus: From October 16 to early April at (a)(c), and much restricted in its feeding grounds compared to the Pale Harrier. Of 30 sightings, 9 were males (the expected number). Often 4 or 5 at one time over the large area at (a). Dobbs (1959) recorded the Pale as more numerous than the Marsh ("common" and "occasional" respectively), but probably due to lack of suitable feeding areas close to Sokoto for aeruginosus. Both Harriers and the Black Kite may be seen quartering the same marshy area together.

West African Harrier Hawk Polyboroides radiatus: A pair often seen at (f) where they probably bred; juveniles seen here in September and at (g) in October. Single birds seen at (b)(c)(e)(f)(i) from late June to late November where they were no doubt searching for weaver nests. We only once saw them at such work; in September, one adult attacking nests

and the other feeding on the ground. But we found much evidence of their (presumed) activity at (c)(f)(i). Possibly only one adult pair near Sokoto.

Eritrean Shikra Accipiter badius: Seen from June to October at (c)(e)(f)(g)(h)(i) and around the town, hunting birds and termites. Often chased by Pied Crows Covus alb us. Juveniles seen in July, differing from the adult in their yellow eye and streaking on the breast and belly. Once 4 were seen "playing" together in October.

Chanting Goshawk Melierax metabates: Seen throughout the year and resident at (a)(b)(c)(d)(e)(h), where it was often in pairs. Occasionally seen at (f)(i). An adult and a juvenile were seen together in November, a single juvenile in September. Juveniles have yellow eyes, white cere and pink legs. The adults often flush Black Kites out of trees.

Gabar Goshawk M. gabar: Less often seen than the Chanting Goshawk; throughout the year. Serle recorded it breeding here in April and May. Of 28 sightings, 7 have been of melanistic birds (cf. Morel and Morel 1962, 2 sightings only). A melanic juvenile was seen in July (rec.); it had a pale green eye, grey cere and yellow legs. Adults seen at (e)(g) and probably resident there, and (h)(i).

Lizard Buzzard Kaupifalco monogrammicus: Seen twice: single birds at (g) in July and (f) in September.

Grasshopper Buzzard Butastur rufipennis: Seen 3 times: single birds at (d) in March, near (e) in July and over (g) in November.

Long-legged Buzzard Buteo rufinus: Once seen wheeling over (d) on February 11 (cf. Fry 1967). Our thanks to Mr. R. Sharland who pointed out rufinus to P.J.M. in Kano.

Red-tailed Buzzard B. auguralis: Seen from late June to late January, resident pairs at (h)(i), occasionally at (f) and once over (b).

Booted Eagle Hieraaetus pennatus: Seen around Sokoto in October and January to March, 13 sightings 1 of which was a dark phase. Single birds pairs and one trio.

Tawny Eagle Aquila rapax: Seen from October to February, and a possible sight in July. Breeding at (i) in November 1970, copulating at (i) in October 1971 and aerial display there in November. Also seen every month at (h) and one sighting each at (b)(d). Presumably the same pair each year. On one occasion, an Eagle allowed us to approach to 15 yds. before flying off.

West African Black Kite Milvus migrans: Recorded in every fortnight throughout the year, and every week by Dobbs (1949). However, this

conceals a definite movement away from Sokoto during the wet season. A major roosting area are the high Mahoganies of (e) used by 50-100 Kites for most of the year, but from July to September only 1-10 may be seen. Our sightings in 2 years in the study areas were:- 162, 88, 193, -, - (observers absent), 151, 73, 4, 47, 281, 113, 174. These figures indicate a fairly constant Kite population in 9 months of the year and only falling to near zero for the weeks of August. On July 16 a group of 30 Kites was wheeling over (f) in the evening, and perhaps preparing for their move north. Clearly, Sokoto is at the southern limit of the Kites wet season distribution, and this detail apart, their movements seem as outlined by Brown (1970).

They breed here, in any suitably high tree (part 3). Often seen quartering the marshes, and may be seen sitting on the ground there. Once seen chasing a heron until the heron dropped its fish when the Kite picked it up.

No positive identification of Milvus m. migrans.

Black-shouldered Kite Elanus caeruleus: Seen throughout the year except September at (a)(b)(c)(d) and at times over farmland near (f)(g). The highest numbers are recorded in the dry season and there is a definite dispersion during the wet season; our sightings are:- 18, 23, 35, -, - (observers absent), 9, 16, 7, 0, 5, 4, 6. It prefers marshland around Sokoto which helps to explain its decrease with the rains, but this preference seems atypical (cf. Bannerman 1953). Breeding noted at (d) in February and March, copulation in February, and once in July 2 birds were "playing" in the air - keeping close together, flapping their wings exaggeratedly and flying around each other; the performance lasted 5 mins.

Swallow-tailed Kite E. riocourii: Seen only from November 18 to early February over all dried fadama areas (a)(b)(c)(d) and once in January at (h) (a pair). Usually very small groups but 20 seen at (a) in January. These birds have orange legs, and one Kite did not have the black patches on the under-wing.

Osprey Pandion haliaetus: One bird fishing at (a) on March 7.

Abyssinian Lanner Falco biarmicus: (At first confused with F. chicquera). Seen singly or in pairs at (b)(c)(d)(e)(i) throughout the year, and occasionally in the other areas. Breeding in January and February (part 3), juveniles seen in June and July.

Red-necked Kestrel F. chicquera: Occasional pairs seen at (a)(b)(e) and single birds more often at (a)(d)(f)(i). Very adept at catching flying insects which it then holds in the talons during flight while it eats them.

Grey Kestrel F.ardosiaceus: Seen on 4 occasions: a juvenile at (g) in August and October, a pair at (b) in November, and an adult at (d) in December.

Kestrel F.tinnunculus: From September 27 to April 12 at all areas except (e). Up to 6 birds in one area at a time. They have favourite perches for eating their prey; one such was covered in the guts of grasshoppers. No Falco t.rufescens seen.

Double-spurred Francolin Francoelinus bicalcaratus: Seen throughout the year at (b)(c)(g) and occasionally at (a)(d)(f)(h). Usually in groups of 5-10, but once numbering 20 at (g) in January and most were juveniles. Courtship seen in October.

Stone Partridge Ptilopachus petrosus: Seen or heard from June to November at (h) but possibly resident there (rec.). Never more than 3 birds.

Helmet Guinea Fowl Numida meleagris: Everywhere and especially on old farmland (rec.). The domestic birds completely confuse knowledge of the wild distribution. The former's eggs are available from May to September.

Black Crake Limnecorax flavirostra: Though the Crakes, moorhens and gallinules are conspicuously coloured birds they are often overlooked because of their secretive behaviour in marshes. The Crake is seen, and is probably resident at, (a)(c) and in the wet season also at (b)(f). Kware marshes provide the best habitat.

Lesser Moorhen Gallinula angulata: Seen on 4 occasions: pairs at (b) in June, and (c) in August and September.

African Moorhen G.chloropus: Throughout the year at (a)(b)(f) and once at (c). Juveniles seen in November. Up to 20 seen at the pond at (f). This species is more frequently and widely observed than the Lesser Moorhen.

Purple Gallinule Porphyrio porphyrio: Single birds at (b) in June and July, at (c) in March and September.

Lesser Gallinule P.alleni: Seen on 2 occasions: a pair at (a) in July, one bird at (c) in September.

Senegal Bustard Eupodotis senegalensis: Seen or heard only among the rocky hills of (i) in January, July to October. In the evenings of July to September, 3 or 4 birds at least would call loudly and fly around. Probably resident there.

Lilytrotter Actophilornis africana: Throughout the year at (a)(b)(c)(d) all of which have large lily-covered pools for most or all of the year. Sometimes in large numbers of 100 or more (rec.). Copulation seen in July and August, chicks in September to November. Also seen at the clear pond at (f).

Spotted Thick-Knee Burhinus capensis: A pair of birds at (i) in January.

Spur-winged Plover Vannellus spinosus: Throughout the year at (a)(b)(c)(d) sometimes in numbers of 20-30 and once 50 birds at (b). Usually in pairs (rec.). A persistent robber of humans and raptors. Breeding in April (part 3), a chick seen in August.

Black-headed Plover V. tectus: Seen 5 times: groups of 4-6 at (h) in July and (i) in June, July and December. Copulation seen in June, without any courtship but much calling. Once seen mobbing a Red-tailed Buzzard.

Senegal Wattled Plover V. senegallus: Seen on 3 occasions: a single bird among rocks at Amanawa in July, a tight group of 7 on the floating vegetation of lake Kware in August, and a single bird at (b) in September.

Lesser Ringed Plover Charadrius dubius: From September 29 to April 1 in very small numbers at (b) and at odd times at (a)(c)(d)(f). One loose group of 15 at (d) in January. A single bird at (b) on June 10. No C. hiaticula seen.

Kentish Plover C. alexandrinus: Seen once at (d) on February 1.

Caspian Plover C. asiaticus: Unmistakable male in breeding plumage at (c) on February 6, standing on a grassy island with a large group of Pratincoles. This seems to be the third Nigerian record (Elgood et al, 1966).

Black-tailed Godwit Limosa limosa: From September 25 to March 21 at (a)(b)(c)(d), usually in groups of 4-6, but a group of 200 flying over (c) on September 25, and 10 at (a) on July 1.

Greenshank Tringa nebularia: From September 11 to April 3 (to April 10, Broadbent pers. comm.) at (a)(b)(c) and odd birds at (d)(f). Usually very small groups, but 30 at (a) on July 1.

Marsh Sandpiper T. stagnatilis: From October 22 to April 11 at (a)(b)(c)(d) in small groups, but 20 at (a) on July 1.

Wood Sandpiper T. glareola: From September 30 to April 12 at (a)(b)(c)(d)(f) in small groups of 5 or 6, once numbering 20 on March 21 (rec.). One bird seen at (b) on June 13.

Green Sandpiper T. ochropus: From September 29 to April 7 at (a)(b)(c)(f). Not at all common and only 23 sightings, single or paired birds. Group of 6 at (c) on April 11.

Common Sandpiper T. hypoleucos: From August 5 to April 12 at (a)(b)(c)(d)(f). Always singly though several may be in an area together. Group of 25 at (b) on September 29.

Redshank T. totanus: From September 19 to April 7 at (a)(b)(c). Only 12 sightings in 2 years; one bird feeding on a field near the river.

Spotted Redshank T. erythropus: Much commoner than the Redshank, 100 sightings. From January 8 to April 6 (to April 10, Broadbent pers. comm.) at (a)(b)(c)(d)(f). Often standing on one leg. A tight group of 50 at (c) in February. Five birds on July 1 and one bird on April 1 were in their black breeding plumage.

Common Snipe Gallinago gallinago: Only this one of the 3 species satisfactorily identified. From January 8 to April 6 at (a)(b)(c)(f).

Little Stint Calidris minuta: From October 17 to April 11 at (a)(b)(c)(d). Generally in groups of 10-30, but 100 on February 6 and February 11. No C. terminckii seen.

Ruff Philomachus pugnax: Without doubt the commonest Charadriid and usually in flocks of thousands. From August 30 to April 11 at (a)(b)(c)(d). Of 34 groups of this species, only 3 held less than 100 birds each. See also Mundy & Cook (1971 b). The fadamas at (a)(b)(c) at times must be supporting millions of these birds: they probably outnumber all other Charadriids together and their ecological impact must be tremendous. Once, over lake Wurno, a flock rose up into the air like a billow of smoke and then rapidly subsided, levelling itself into a thin line flying over the lake at a height of 3' - 5'

Black-winged Stilt Himantopus himantopus: Our sightings show that it is a dry season visitor, and probably therefore a palearctic migrant, with very few staying throughout the year: - 37, 132, 87, 51, - (observers absent) 10, 3, 0, 12, 77, 19, 40. Usually in groups of 15-20 at (a)(b)(c)(d)(f), and rarely are single birds seen. Once, in March, 2 birds were seen jumping up and down together and perhaps fighting.

Painted Snipe Rostratula benghalensis: Seen 10 times: at (b) in March and June around a lily-covered pool (8 times, male and female), a female at (f) in June, a female at (c) in December. Dobbs (1959) saw it every week from March to July 1954, at the same pool on (b).

Egyptian Plover Pluvianus aegyptius: Throughout the year at (a)(b)(c) normally in small groups but occasionally numbering 50-100 (in August to October only). Often scurrying along the roadsides at its favourite

spots near the bridges of (b)(c). It seems to disappear in certain months:- 0, 39, 23, -, - (observers absent), 3, 0, 120, 71, 63, 30 3.

Temminck's Courser Cursorius temminckii: Pairs seen on 3 occasions: at (h) in February and (i) in February and June.

Bronze-winged Courser C.chalcopterus: One killed by our car in July, through sandy rocky country at dusk. Several others on and over the road.

West African Pratincole Glareola pratincola: Group of 20 at (a) in January, and 50 at (c) in February (rec.).

Lesser Black-backed Gull Larus fuscus: Group of 6 on the open water of (a) on March 19.

White-winged Black Tern Sterna leucopetera: (At first confused with S.albifrons.) Small groups at (a) in January and March.

West African Little Tern S.albifrons: Probably resident at (a) in small numbers; we have seen it there in January to March, July and November. Also at odd times over (b)(c) in February, June and August.

Chestnut-bellied Sand-Grouse Pterocles exustus: Seen on 3 occasions at (i), groups of 25 in January, October and November.

Speckled Pigeon Columba guinea: Encountered almost everywhere in and around Sokoto town, but especially gathering on the fadamas and near water; this preference being confirmed by its absence from (h)(i). The Cement Factory serves as a roost for perhaps 200. Local people set out earthenware pots in trees and on houses which prove a favourite nesting site for this species (and not unusual as noted by Serle): the people then eat the nestlings.

European Turtle Dove Streptopelia turtur: Seen 3 times: single birds at (g) in October and February, and at (e) in October.

Niger Mourning Dove S.decipiens: Seen everywhere near Sokoto with the same preference for water as shown by the Speckled Pigeon; also occasionally at (h) but never at (i). Generally in smaller groups than the Speckled but more widespread. Breeding (part 3). We have never seen S.semitorquata though it reaches latitude 14° 50'N. in Senegal (Morel and Morel, 1962). The Mourning Dove is the bird that "laughs", as also noted by Dobbs (1949).

Vinaceous Turtle Dove S.vinacea: Rather few seen, perhaps because Sokoto is well-watered. Resident at (h) and also occasionally seen at (b)(e)(g).

Laughing Dove: S. senegalensis: Seen everywhere in and around Sokoto, but no preference for fadamas. Found throughout the town as is the Speckled Pigeon, and especially at (e)(f)(g), and surprisingly at (h). Once seen at (i). Breeding (part 3).

Namaqua Dove Oena capensis: Occurs in all our areas but only occasionally at (b)(c)(d)(e)(f)(g) and then usually in twos or threes; throughout the dry season at (a) in small numbers. Its favoured habitat is (h) where in December and January 50-100 birds may live. Pairs also seen at (i). Breeding in October and November at (h)(i)(part 3). They practically disappear from June to September (see Robinson 1971): our sightings are:- 49, 26, 50, -, - (observers absent), 10, 3, 0, 3, 83, 13, 105.

Black-billed Wood Dove Turtur abyssinicus: Resident throughout the year at (e)(f)(g)(h) and occasionally seen at (a)(b). Generally a bird of woodland and thick undergrowth where we see it in small numbers, but it also appears to be equally numerous in the more exposed (h). Dobbs (1959) calls it a "dry season bird" and our sightings do indicate perhaps a movement away during the rains:- 11, 31, 22, -, - (observers absent), 6, 6, 4, 4, 11, 4, 6. No T. afer seen.

Yellow-bellied Fruit Pigeon Treron waalia: Seen on 2 occasions at (g): 1 bird in November and a group of 10 in December.

Senegal Parrot Poicephalus senegalus: Seen twice at (e), single birds in June and August. This is a gregarious bird, common to the south of latitude 12½° N.; and it is a popular cage bird at Sokoto. We feel, then, that these 2 records are of an escaped parrot rather than of a species at its northern-most extent - though it reaches 16° N. in Senegal (Morel and Morel 1962).

Grey Plantain Eater Crinifer piscator: Resident at (e) in a group of 5 and breeding there in September (part 3). Resident also at (g), no more than 3 seen there; occasionally also at (f). Always in the tree-tops.

Great Spotted Cuckoo Clamator glandarius: Parasitic upon the Pied Crow Corvus albus; the Crow breeds in May to July and we have seen adult cuckoos from April to September, generally singly, occasionally in pairs (rec.). During this period and whilst on a study of Crows (Mundy & Cook 1971 and in prep.), we found very few cuckoo eggs and sighted adult birds only 11 times. This indicates a small population, perhaps at the northern limit of its migration (but cf. Serle); this Cuckoo is "common" at 16° N. in Senegal, but has not been recorded breeding there (Morel and Morel 1962).

Adults can be seen anywhere except in thick woodland. A juvenile (i.e. rufous throat and dark back) was seen on January 6 and might have been a palearctic migrant (cf. Elgood et al, 1966).

Pied Cuckoo C. jacobinus: Seen once at (h) in October. (Doubtfully at (e) in December).

Levaillant's Cuckoo C. levaillantii: From June to October at (g), generally a pair; also once seen in a Forest Reserve near Kware in September.

Solitary Cuckoo Cuculus solitarius: Once at (h) in September.

African Yellow-billed Cuckoo C. canorus: Seen on 4 occasions: at Amanawa in July, September and October, and at (e) in August. Six sightings.

Klaas' Cuckoo Chrysococcyx Klaas: Seen from May to October at (e), 7 single birds. Hence much less common than the Didric Cuckoo. On occasions it will call loudly and monotonously from a conspicuous perch (cf. Dobbs 1949). Once, individuals of Klaas' and Didric were very close to each other, allowing direct field comparison; the useful features additional to Bannerman's (1953) description are:- Klaas' has a black eye and the underside of its tail appears white with faint grey bars; Didric has a red eye, yellowish throat, and the underside of its tail appears black with white bars. Both species have a conspicuous white patch behind the eye.

Didric Cuckoo C. caprius: Seen from June to October at (b)(e)(h)(i), 18 sightings. It was seen in every one of these months at (h) where many weaver species rest. Chasing and calling noticed from July to August (rec.). In October at (h) an adult pair were seen together with a juvenile (i.e. rufous throat and spotting rather than barring).

Black-bellied Coucal Centropus toulou: Seen once at Kware marshes in July.

Senegal Coucal C. senegalensis: Resident in all our areas except (i). It prefers woodland, when several pairs may be found. Copulation seen in July and October.

African Barn Owl Tyto alba: Sighted 6 times; resident at (f) at least.

African Scops Owl Otus scops: Found once at (e) in January. Probably resident there.

White-faced Owl O. leucotis: Breeding in February near (f) (see part 3). No other sightings.

Pearl-spotted Owlet Glaucidium perlatus: Seen twice, in the evenings, at (e) in April and June. (We did not note the occurrence and distribution of owls aurally.)

Algerian Marsh Owl Asio capensis: From January to July at (a)(b) and Kware, 18 sightings. Always sitting on hard ground or on floating, marshy vegetation. A characteristic rufous patch on the wings.

Plain Nightjar Caprimulgus inornatus: Nightjars are difficult even when in the hand, and we have therefore been very careful in our identifications, to the extent of pursuing a bird around the area until we are sure. We have identified 3 species on field characters alone:- the Long-tailed is distinctive, thus leaving confusion between the Plain and Standard Winged; the key field characters we use are white wing patches (a Plain male), rufous and black wing barring (Standard-winged birds), neither of these (a Plain female).

On this basis the Plain Nightjar occurs from June to January at (h) (i) and always at least in pairs. Four birds at (a) in January.

Long-tailed Nightjar C. climacurus: Seen 4 times: at (b)(g) in January, April and December, on open fields, woodland paths, or within the Neen plantation (cf. Dobbs, 1959).

Standard-winged Nightjar Macrodipteryx longipennis: From June to August at (h)(i). A male with plumes on the town's edge in June.

Common Swift Apus apus: Seen on August 13 at (a) (100 birds), on August 13 (separate years) at (h) (5 birds), and on November 30 at (e) (50 birds).

Little African Swift A. affinis: Seen throughout the year and resident in certain towns (e.g. Sokoto, Sifawa). Seen over all our areas, usually in groups of 20-40.

Palm Swift Cypsiurus parvus: Probably more numerous and more widespread than the Little Swift, and following the general distribution of Borassus Palms. Seen over all our areas but not usually in such groups as the Little African Swift. Is this due to a less social habit or to the nature of its food?

Pied Kingfisher Ceryle rudis: Resident at (a)(b)(c)(d) and present at (f) at the end of the wet season (1 pair). Usually singly or in pairs (rec.); up to 10 birds in any locality. Breeding in October. This species is by far the commonest kingfisher. It seems to have a low success rate with its fishing method - on perhaps one plunge in ten it catches a fish.

Malachite Kingfisher Alcedo cristata: A juvenile on Kware marshes in October (cf. Dobbs, 1959).

Pygmy Kingfisher Ceyx picta: Seen at odd times in the year at (b)(c)(f) and probably resident; at (g) in June; and surprisingly at (e) in June and August. Always seen singly and close to water (or the swimming pool at (e)!). Possibly breeding at (f) in August. 13 sightings.

Senegal Kingfisher Halcyon senegalensis: Once at Amanawa in July

Striped Kingfisher H. chelicuti: A pair at (e)(f) and probably resident. Seen once at (h) in August. A display among 4 birds was seen in late March, 2 raising and lowering their wings and calling loudly (rec.).

Grey-headed Kingfisher H. leucocephala: 38 sightings from June to October:- 0, 0, 0, -, - (observers absent), 8, 17, 4, 3, 6, 1, 1. Possibly nesting at (f) in June, juveniles (i.e. lacking the chestnut belly, and once with a black bill) in June to September. Regularly seen at (e)(f)(h) and occasionally at (b)(c)(g). In June a pair were seen sitting side by side on a branch, one was ruffled on the head and persistently tried to prod the belly of the other, which soon flew off. In marked contrast to the Pied Kingfisher, the Grey-headed seems to have a high success rate with its hunting swoops.

Carmine Bee Eater Merops nubicus: Seen at (a) from November to April, not more than 5 together; a noisy group of 25 passing over (g) in June, and a pair over (h) in July; a group of 12 over lake Kware in August. Often sitting on the backs of cows and goats.

White-throated Bee Eater M. albicollis: Seen once, a group of 25 passing slowly through (e) on October 27.

Least Bee Eater M. pusillus: Very catholic in its choice of habitat, for we find it in all our areas except (g); surprisingly always 1 or 2 birds inside the Neen plantation near (f). Hole-digging in April. Up to 20 birds seen in any one locality, but especially at (b)(d)(f) (rec.). Our sightings indicate a marked reduction in numbers in August and September:- 26, 17, 61, -, - (observers absent), 32, 47, 6, 5, 19, 38, 11.

Abyssinian Roller Coracias abyssinica: Seen throughout the year, and breeding. However it almost disappears in August and September (cf. Least Bee Eater), and it is certainly most obvious in the dry season:- 16, 31, 33, 10, - (observers absent), 16, 22, 5, 1, 12, 12, 7. It is found in all our areas except (i) in groups of 2-4 (rec.) though seeming to prefer the fadamas. Juveniles (i.e. without the long tail streamers) are seen in June to August. Once seen sitting on a branch 6 ins. away from an Abyssinian Lanner. No C. garrulus seen.

European/Senegal Hoopoe Upupa epops: Single birds seen at (d)(f)(g)(h) (i) in February, March and October; (e) is its favourite habitat ($\frac{2}{3}$ of our 42 sightings there) where it occurs in groups up to 8 in January to March, October and December, the group of 8 being seen on February 8. Breeding in a tree-hole at (e) in March, at a height of 2', with both parents feeding the nestlings - a group of 4 seen there in June. Although we cannot distinguish the 2 subspecies in the field, our sightings indicate the arrival of palearctic migrants:- 1, 10, 14, -, - (observers absent), 5, 1, 0, 0, 5, 0, 6.

Grey Hornbill Tockus nasutus: Seen at (e)(f)(g) singly or in groups of 3-6 and usually feeding on the ground. On 4 occasions we have seen "migration" movements: 2 groups of 16 and 20 passing westwards over (h) in July in separate years; a group of 12 flying northwards over lake Kware in August; a group of 50 passing south through (g) in October, generally noisy (rec.) but determinedly moving with only an odd bird stopping to feed. Outside these 3 months, few have been seen:- 6, 0, 3, -, - (observers absent), 1, 47, 16, 2, 55, 6, 4. These Hornbills can cling to trees like a woodpecker.

Red-beaked Hornbill T. erythrorhynchus: Found in the same areas as the Grey, (e)(f)(g) and also seen once at (c). Generally in smaller groups of 1-3, though a group of 8 at (g) in January. These birds seem to be resident throughout the year; we have seen no movements and their numbers are constant:- 10, 7, 6, -, - (observers absent), 8, 6, 6, 2, 10, 3, 4. Each area holds a few. Our sightings of these 2 Hornbills support Dobbs' (1959) figures, but certainly not her conclusion. The Grey is also a migrant, and the Red-beaked a resident, at 16° N. in Senegal (Morel and Morel, 1962).

Bearded Barbet Lybius dubius: Found only in (e)(f)(g). Though a brightly coloured bird its behaviour is mostly cryptic. Seen singly or in pairs, but groups of 4 on 3 occasions, in January, July and December. At least 1 pair live at (e) - courtship (i.e. chasing each other in circles) there in April, and a quartet in July.

West African Barbet L. vielloti: More common than the Bearded and conspicuous. It has a much wider habitat tolerance, being found in (b)(e)(f)(g)(h)(i) though resident only at (e)(g)(h). Nearly always found in pairs (rec.), generally outside woods. As with the Bearded, (e) holds 1 or 2 pairs. Bannerman fails to note the preliminary crescendo "purr" (called a "snarr" and "snarl" by Payne and Skinner, 1970) at the beginning of a call. Birds call throughout the year and would often pass unnoticed were it not for that. On several occasions we noted that one bird may keep calling after its partner had stopped. We agree with Payne and Skinner's conclusion that each bird has its own rhythm of calling.

Yellow-fronted Tinker Bird Pogoniulus chrysoconus: Without doubt the commonest Capitonid of the three. Found in the same areas as the Bearded, (e)(f)(g), where it is resident in some numbers; (e) holds at least 10 pairs (rec.). Courtship seen in April, and copulation in December.

Black-throated Honey-Guide Indicator indicator: 12 sightings: at (e) in February; at (g) in June, October and December; and (h)(i) in July. When 2 birds fly in circles, in courtship, they make a loud and distinctive "whirring" noise; heard at (e) in February.

Grey Woodpecker Mesopicos goertae: Resident at (e)(f)(g) and occasionally seen in the wooded parts of (c)(h). We do not find it a shy bird and, more often than not, it is the Grey Woodpecker that gives the alarm when an observer quietly enters the wood. Usually seen in pairs, (e) holding at least 2 pairs. Courtship (i.e. chasing each other) in August and December. Once seen catching flying termites.

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BIRD NOTES FROM THE PLAINS SOUTH OF LAKE CHAD

WINTER 1971-1972 PART 1

by

D.A. HOLMES

Among a team of soil surveyor working on the South Chad Irrigation Project were three bird-watchers, R.A.J. Harrison, R.B. Tucker and myself. Only the first named had had previous experience of this climatic zone (in Sudan), the other two being newcomers to the African continent in the context of this report. We arrived in mid-October 1971, shortly after the last rains, and remained in the area for most of the period until we left at the end of March 1972.

The project area consists of the flat clay plains south of Lake Chad, in the area of Marte, Dikwa, Logonani, Ngala and Gambaru. It is bordered on the south by the seasonally swampy area south of Logonani, on the east by the river Ebeji (a river of the Logone-Chari system), and on the north by a well marked sand ridge. This northern sand ridge slopes down to a flat marginal zone bordering Lake Chad (this zone lies outside the project area and we were rarely able to visit it). The seasonal River Yedseran runs north across the clay plains. Scattered through the plains are a number of low sandy rises, and all the villages are sited on these.

The clay plains are uncultivated, being used only for grazing, and are not normally burnt in the dry season. They are largely devoid of trees and carry three types of grassland. The predominant type is a dense growth of tall wild Sorghum, while adjacent areas carry a sparser growth of Pennisetum grass. Some extensive areas however carry only very short grass and quickly become almost bare in the dry season. Acacia arabica groves grow along depressions and seasonal channels. The sand ridges originally carried a dense thorn scrub of such species as Acacia sayal, Balanites, Zizyphus, Calotropis and Tamarindus, but in most

parts the vegetation is now rather sparse and the better wooded parts are now confined to some parts of the northern sand ridge and the riverine (Ebeji) zone.

Cultivation consists principally of Sorghum crops grown around the margins of the sand rises where they border on the clay plains. They are harvested in January. Some raid-fed crops (e.g. guinea corn) are grown on the sandy soils during the wet season (June to September). In total only a very small proportion of the total area is cultivated, but there is extensive grazing. Plans are on hand for the development of about one-third of the clay plains for irrigated agriculture.

At the end of the wet season in October, the clay plains are flooded. Bird life is very rich at this season. However by December the plains are dry and standing water is confined to the channels and local swamps which dry out about a month later. The Ebeji is often at its peak flow in December and was still flowing at the end of March. As the country dries up the wetland birds become more concentrated and local and many move away. By March the area away from the lake and now depleted river is waterless and water birds are very scarce. Puddles of waste water around village wells are then an attraction to birds from the surrounding scrubland. Indeed our water-filled canvas bath proved much more valuable as a bird bath than as a drink cooler, its original purpose.

The records that follow all refer to the project area defined above, except for a few extra-limital records indicated by brackets (brackets are also used for unconfirmed records). Few trips were made outside this defined area (except for one to Waza game reserve and the hills of North Cameroun in late February). Indeed from mid-January to mid-March we were virtually confined to the drier western area near Ala (between Dikwa and Marte), well away from the more interesting riverine zone.

The order and scientific nomenclature is that used by White (1960-65). All records are my own except where the observer's initials are given.

(North African Ostrich Struthio camelus: Not recorded in the area. Present in Waza game reserve, Cameroun.)

African Little Grebe Podiceps raficollis: A few seen along the Ebeji at high water in December.

Rosy Pelican Pelecanus onocrotalus: Flocks of up to a hundred flying south over Ngala in mid-January. The identity of the few other pelicans seen in the area was not established.

(Grey Pelican Pelecanus rufescens: The only record is of six at a waterhole, feeding on mudfish, at Waza, Cameroun.)

Long-tailed Shag Phalacrocorax africanus: Widespread in wet areas in October, becoming concentrated along the Ebeji in December when the country dried out. Numbers later decreased, with only small numbers by the river and lake.

Night Heron Nycticorax nycticorax: Small numbers in the Ngala area up to early December (with immature birds seen at the end of October), and a few seen along the river in late March.

Squacco Heron Ardeola ralloides: Common in autumn, later restricted to the river and lake margins.

Cattle Egret Ardeola ibis: Common generally in autumn, becoming localized in spring to, for example, the Gambaru irrigation scheme and the lake shore zone. However a few individuals were encountered far from water, and they were common in the dry, hilly cattle country of N.Cameroun in late February.

Black Heron Egretta ardesiaca: Two records: two on a seasonal stream in October, and a party of eight on the river on 11th December.

Great White Heron Egretta alba: Solitary birds seen commonly along the river.

Little Egret Egretta garzetta: Common in October and November, becoming scarce as the season advances, although solitary birds were encountered far from water in Spring.

Grey Heron Ardea cinerea: Common. Slightly fewer numbers than the next species. Becoming local as the country dries out, although occasionally encountered far from water

Black-headed Heron Ardea melanocephala: Rather commoner than the previous species, but becoming local as the country dries out, although a few individuals are seen far from water.

Purple Heron Ardea purpurea: Uncommon. Three records of single birds and one of a party of five, in November and December. After that, seen only by the lake, except for one on the river on 27th March.

(Hammerkop Scopus umbretta: Not seen in the project area. Several in and around Waza in February.)

White Stork Ciconia ciconia: A flock of 40-50 present in grass plains near Marte through November; thereafter few seen.

(Abdin's Stork Ciconia abdinii: Party of 30 storks at Ngala on 8th November believed to be this species, but seen at a distance, and may

have been confused for Black Storks Ciconia nigra, of which we have no record.)

Woolly-necked Stork Ciconia episcopus: A few single birds or pairs seen up to early January.

Saddle-bill Ephippiorhynchus senegalensis: Two records only, of solitary birds, but common in Waza, Cameroun.

Open-bill Anastomus lamelligerus: Common up to January, then only recorded from the remaining wet areas.

Marabou Leptoptilos crumeniferus: Infrequent, December onwards, with parties of up to 30, becoming rare in March.

Wood Ibis Ibis ibis: Moderately common up to early December, with parties of up to 24. No subsequent records, except at Waza.

Sacred Ibis Threskiornis aethiopica: Moderately common up to mid-January, after which seen only near the lake and river (and at Waza, Cameroun).

Hadada Bostrychia hagedash: One record only, a solitary bird in dense growth by the Ebeji on 16th December.

Glossy Ibis Plegadis falcinellus: Small numbers up to mid-December. Thereafter only seen near the lake (4 in February), and 4 on the river on 26th March.

African Spoonbill Platalea alba: A few small parties up to mid-December, and one on the river on 27th March.

Whistling Teal Dendrocygna viduata: Common up to mid-December, and seen along the river in mid-January, after which they presumably become very localized. D.bicolor was not identified.

Egyptian Goose Alopochen aegyptiaca: Probably overlooked, with only one confirmed record, of 30 or more in a small swamp near Ala on 23rd November.

Spur-winged Goose Plectropterus gambensis: Apparently the commonest of the larger anatidae, in parties of up to two dozen, and at least 100 in the swamp south of Logonani on 16th January. Scarcer later in the dry season, although parties seen in the grass plains far from water. Doubtless at this season they concentrate at the last remaining pools, as suggested by an estimated 2000-3000 in the marsh behind the rest-house at Waza, N.Cameroun, in late February. A large proportion of birds in December and January were in immature plumage.

Comb Goose Sarkidiornis melanota: Possibly overlooked earlier. Some identified along the river in December, and up to 100 in the swamp south of Logomani on 16th January. The pale or even whitish rump in flight seems to be a useful character not described in books.

Pygmy Goose Nettapus auritus: Unconfirmed record of 4 or 5 in a small swamp near Ala on 26th November (RAJH); possibly the species has been overlooked, especially early in the season.

Common Teal Anas crecca: A drake with other duck near Logomani on 16th January.

Pintail Anas acuta: Large flights of duck at dusk and dawn and on moonlit nights, over Marte and Ngala, from 12th November to about mid-December, were believed to be this species. Confirmed record of some 200 in the swamp south of Logomani on 16th January. Night flights last noted on 23rd January, the last record.

Garganey Anas querquedula: Large numbers of duck, numbering up to a couple of thousand, flying fast at height in a southerly direction over Ngala at dusk, during the week October 23rd-27th, were believed to be this species. These were apparently feeding flights, rather than migration, perhaps to the swamps a few miles south, as some at least returned at dawn. Confirmed records are of a lone bird in a roadside pool on 2nd November, and some three dozen in the swamp south of Logomani in mid-December and mid-January.

Shoveller Anas clypeata: A drake with other duck near Logomani on 16th January.

Ruppell's Griffon Gyps ruppellii and Nubian Vulture Torgos tracheliotus: Big vultures are tolerably common in the area but unfortunately their identity was not established; until March we had assumed them to be Griffons, without closer examination. Griffons are certainly present (identified partly by the presence of a white bar near the leading edge of the underwing), but it seems likely that the Nubian is present too. Indeed we believe that vultures seen at nests may have been Nubian; three were present at a massive nest in an Acacia arabica in a wide grass plain NE of Logomani in November, and RBT noted large vultures at a nest in February.

White-headed Vulture Trionoceph occipitalis: Moderately common, and more readily identified than other vultures, but it is difficult to give the relative abundance of the different species. Birds seen in February were in fine, fresh plumage.

White-backed Vulture Cyps bengalensis: Not often identified, but evidently fairly common, for the majority of vultures at a carcass in early March were of this species, although some half of those present failed to show the white back and were presumably immature.

Hooded Vulture Neophron monachus: The most generally widespread and abundant vulture. We have no records of the Egyptian Vulture, Neophron peronopterus.

Pallid Harrier Circus macrourus: Only adult males identified. Very common or even abundant, quartering the grass plains, from our arrival in mid-October, but numbers slowly decreased through December and January, and from 20th January all male harriers (except Marsh Harriers) were of the following species. Possibly they move on south later in the winter (one was seen at Rhumsiki, S. of Mokola, N. Cameroun, on 22nd February).

Montagu's Harrier Circus pygargus: Only adult males identified. None identified until 22nd November, but prior to this date many immature male harriers were seen, some of them undoubtedly of this species. Although never in such numbers as the Pallid Harrier was early in the season, they remained common throughout the rest of the period, replacing the Pallid completely after the end of January. Habitat and mode of hunting of the two species seemed to be identical. Numbers possibly decreased a little at the end of March but some were still present on our departure on 27th March.

Marsh Harrier Circus aeruginosus: Seen quite commonly in the grass plains during November, although these had dried out. Subsequently seen only near water.

Bateleur Terathopius ecaudatus: Uncommon. A total of five records of solitary birds, in the west of the area or along the road to Maiduguri, November to February.

Short-toed Eagle Circaetus gallicus: Circaetus eagles of either this species or Beaudouin's (C. beaudouini) are the commonest large eagles of the area, with one or two seen on most days. Their field identification is perhaps beyond the capacity of a visiting amateur, but birds seen perched on 7th February and 6th March were confirmed as C. gallicus by the colour of the soft parts, assuming this is a reliable feature (dark grey bill and feet, grey-brown legs; these parts are given as yellow for C. beaudouini). Further evidence is that the majority appear to be migratory, for most if not all appeared to leave the area during the first half of March.

Chanting Goshawk Melierax metabates: Very common generally in thorn scrub areas. On two of three occasions from mid-December onwards the

piping call was heard for a prolonged period by day. However the bird seems to be most vocal by night (from about mid-November onwards), and this may be the reason for the literature to describe the call as not often heard. On many or even most nights, the birds were vocal early in the night, and at about one hour before sunrise, but especially on moonlit nights the calls were heard at any time of night. As many as half-a-dozen might be heard at any one time, some calling in flight, but by sunrise they would be sitting still and silent in the same tree-tops from which they had been calling an hour previously. The calls varied in speed of delivery, rising and falling slightly in pitch, and may on occasion have been uttered from the ground. Indeed for a long time we took them to be some form of plover or other ground bird.

On our last evening, 27th March, on the river bank, we were astonished to find that this bird was the author of a "mystery call" that I had throughout believed to be the call of a cuckoo in genus Clamator, owing to a certain similarity to the call of Clamator jacobinus in Pakistan. This call is a clear, ringing, somewhat metallic "quer-qui" or "quer-qui-qui", sometimes running into a longer series: "quer-quer-qui-qui" or similar. The bird we watched calling gave the double note in a single opening and closing of the bill, the "quer" on opening the bill, the "qui" on closing.

The remarkable feature of this call is the circumstances of its delivery. First heard on 1st November, it was heard commonly from the end of November onwards, but with rare exceptions only at dawn, for a period of a few minutes only, at 15-30 minutes before sunrise. In other words, this call was uttered, briefly, after an interval of 15 minutes after the goshawks had ceased calling in the usual manner. Furthermore, although several goshawks may have been calling in the pre-dawn period, generally only one (rarely two) would later give the "cuckoo" call. The identity of the call seemed impossible to determine, since on the few mornings that we could spare time at this hour, the brief delivery was fortuitously in the distance! Since on other mornings the call was heard close to camp, I was forced to assume that the "cuckoo" ranged widely in the area. Since the call originated over a range of two to three miles on different mornings, presumably different goshawks were calling, since they must hold comparatively small territories.

Very rarely was this call heard at any other hour, and this was in most instances in the evening. It was entirely fortuitous that on our last evening, at 17.40 (half to one hour before sunset), a Chanting Goshawk we had seen motionless on a tree-top close by suddenly gave vent to the "cuckoo" call several times, before flying across the river, from whence the call was heard again half-an-hour later.

Although the author of the call was finally solved, it remains a mystery why this very different call should be uttered, by a few birds only, at such specific times of day.

(Gabar Goshawk Melierax gabar: One seen briefly, chasing a Chanting Goshawk, on the wooded river banks near Gamboru, on 1st December, was almost certainly this species, but the possibility of its being one of the smaller accipitrines cannot be ruled out.)

Grasshopper Buzzard Butastur rufipennis: Common in October and early November, after which scarce (two records only, mid-December and mid-January, and possibly one in late March).

Long-legged Buzzard Buteo rufinus: One present at Ala from February 4th to 10th. Identification from the unbarred rufous tail and the striking underwing pattern of black trailing edge, brown coverts, pale secondaries, black carpal patch and white primaries tipped black; upperwing brownish tipped black; head and body brown or pale rufous brown with dark markings; tail especially rufous distally but base of upper tail paler.

A previous bird near Marte on 13th November had precisely the same underwing pattern, but the tail was unusual in being white at the base tipped red.

Long-crested Hawk-Eagle Lophoetus occipitalis: One near Dikwa on our arrival on 21st October is our only record for the project area. Perhaps they move out early after the rains, as we saw several at Waza, N. Cameroun, on 24th February.

Tawny Eagle Aquila rapax: Eagles generally are difficult for the amateur and only this species was identified with any certainty (from large size, overall dark plumage, or "cafe-au-lait" of immatures, and sluggish habits), and is moderately common. However other dark raptors of slightly smaller size are also present, possibly Wahlberg's Eagle, Aquila wahlbergi.

(Verreaux's Eagle Aquila verreauxi: A raptor seen from a moving car in the mountains south of Mokola, N. Cameroun on 22nd February, is entered under this species with "tongue-in-cheek", since this would appear to be well west of its known range, but it is difficult to know where else to place a raptor that was all black except for shining white upperparts. This record is given only as a warning to others travelling in the area of its possible occurrence.)

(River Eagle Haliaeetus vocifer: Seen only at waterholes at Waza, N. Cameroun, in late February, where quite common.)

Black Kite Milvus migrans: Widespread and abundant, especially around villages, and groves of Acacia arabica in dried-out depressions in the grass plains (these latter perhaps being winter migrants); noticeably less common from mid-March.

Black-shouldered Kite Elanus caeruleus: One record only, of a solitary bird at close range near Ala on 5th March. It is unlikely that I would overlook this bird, and the assumption is that this rather tree-less area is outside the bird's normal range, at any rate in the dry season.

Swallow-tailed Kite Elanus riocourii: Three records only, of single birds on 19th January and 4th February, and of a party of some 15 on 7th February. All were moving slowly in a NW direction.

Osprey Pandion haliaetus: One by the lake on 6th February. Another seen in Waza on 23rd February.

Lanner Falco biarmicus: The only larger falcon identified, and believed to be quite common generally, although the possibility of some of those seen being the Peregrine, Falco peregrinus, cannot be ruled out.

Kestrel Falco tinnunculus: First seen on 27th October, subsequently becoming very common generally. By February it was the commonest of all migrant birds of prey, perhaps becoming less common after mid-March, but still present on our departure on 28th March.

(Fox Kestrel Falco alopecurus: A gathering of some 30 at a small fire in the mountains at Rhumsiki (S. of Mokola), N.Cameroun, on 22nd February.)

(Secretary-Bird Sagittarius serpentarius: Our only record is of one in the hills south of Mora, N.Cameroun, on 22nd February.)

to be continued

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CROWNED CRANES

An Appeal

This magnificent bird is emblematic of more than sovereignty; it symbolises also wetland conservation, for Crowned Cranes need marshland for nesting.

In temperate countries marsh drainage has destroyed the habitat of many crane species, which have become scarce and even (like America's Whooping Crane) greatly endangered.

In Africa there seems to be little threat. But who can confidently assert that continually expanding human populations will not sooner or later press for marshland reclamation in rural as well as urban areas?

Crowned Cranes, spectacular and unmistakable as they are, faced with few threats other than loss of habitat, are perhaps the ideal ecological indicator species for monitoring wetland.

Request for help: the status of Crowned Cranes

The International Council for Bird Preservation has set up a World Working Group on Cranes. Five people are to cover the three African species.

ANY INFORMATION THAT YOU CAN PROVIDE IMMEDIATELY about the status of Crowned Cranes in Nigeria and West Africa will be greatly appreciated. It will be even better if in addition you can undertake systematic observations over the next twelve months of all cranes encountered during your travels.

If response is favourable it may be possible to organise a national census in Nigeria.

The information needed

Flock size, locality and date.
Proportion of obviously immature birds.
Habitat (particularly whether on cultivated land (crops):
on or near actual or potential breeding ground).
Frequency of occurrence at given locality.
Roosting and migratory movements.
Relevant observations about land-use, marsh modification;
rain regime and water-table; hunting, mortality; etc.

YEAR-ROUND OBSERVATIONS at a locality will be especially valuable.

Your help is earnestly solicited. Please write to:-

Dr.C.H.Fry,
Department of Zoology,
Tillydrone Avenue,
Aberdeen A B9 2TN,
Scotland, U.K.

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THE SUCCESSIVE USE OF THE SAME NEST BY THE LAUGHING DOVE
Streptopelia senegalensis AND ITS SUBSEQUENT USE BY THE
KURRICHAINE THRUSH *Turdus libonyanus*

In early May 1971 a pair of doves built a nest in the fork of a mango tree which was in the compound of my house at Legon, Ghana. The height of the nest was 5 m. In the period May 1971 to February 1972 the nest was used for five clutches, presumably consecutive ones of the same pair. The first three were successful and young left the nest, but the other clutches both disappeared. During this period material was continually added to the nest so that by February 1972 it had quite a solid base. A second nest was constructed in the same tree in late February at a height of 5.5 m. and the subsequent clutch again disappeared. The first nest was then used again in April 1972. I have no colour ringing evidence that the same birds were involved in both of these clutches but it is highly probable that they were the same and were those involved with the nest in 1971. The reason for believing this is that the compound is small and appears only to support two doves. A further nest appeared in a flame tree some 10 m. from the mango tree in May 1972 and had a clutch of 2 eggs on 13th May and it was apparent that the doves had abandoned the mango tree. This was confirmed by a change of ownership of the nest site in late May 1972. A Kurrichaine Thrush used the old dove's nest as the base for its nest and a clutch of 3 eggs was completed by 1st June 1972. The dates of completion of the various clutches and their success or failure are listed in the Table. From late December 1971 the presence of playing children frequently disturbed the incubating bird and it is likely that the resulting exposure of the eggs made predation easier. In the April 1972 clutch the predator was the Gladiator Shrike *Malaconotus blanchoti*.

Table 1 - Date of clutches of the Laughing Dove
at Legon and details of their successes

Nest No.	Date of completion of clutch	Clutch size	Whether eggs hatched	Whether young left nest. Number of fledglings in brackets
1	Early May 1971	2	yes	yes (2)
	Mid July 1971*	2	yes	yes (2)
	Early Sept. 1971+	2	yes	yes (2)
	26 December 1971	2	no	-
	18 February 1972	2	no	-
2	6 March 1972	2	no	-
1	8 April 1972	2	no	-

* Data obtained by F. Walsh

+ Data deduced from age of nestlings

L. G. Grimes

CORRECTIONS TO THE LIST OF BIRDS SEEN ON
MOUNT CAMEROUN

I am very grateful to Dr.W.Serle for querying the identification of two of the species that I listed in the earlier note (Grimes 1971) and for confirming their re-identification. These corrections are as follows:-

1. Cameroun Swamp-Warbler Bradypterus camerunensis:
This should read Kivu Swamp-Warbler Bradypterus brachypterus centralis. The field notes I listed are described in Bannerman (1953) for this species and were overlooked by me. Dr.Serle writes "Bradypterus brachypterus inhabits the rank herbage of the clearings of the lowland forest round the base of the mountain from the sea up to Buca. The mountain forest Bradypterus is B.barratti camerunensis".
2. Baglafect Weaver Othyphantes baghafect:
This should read Grey-backed Weaver Symplectes amaurocephalus. My field notes which were not given in the earlier note are as follows: black head, dark mantle and black tail, all yellow underparts and undertail coverts. Call notes reminded me of Malimbus species.

Reference: Bannerman D.A., 1953 Vol.2 Birds of W.and E.Africa
Grimes L.G., 1971 N ig.Orn. Soc.Bull.8: 35-41

L.G.Grimes

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NIGERIAN ORNITHOLOGISTS' SOCIETY BULLETIN VOL.9 No.36
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EDITORIAL

As this will be the last time I shall be writing on this page of the Bulletin, (John Button will be taking on the Editorial responsibilities in the New Year), I would like to take this opportunity of thanking all those people who, over the past four years, have withstood the pestering, cajoling and bullying from me to produce material for the Bulletin, and who have yet remained friends!

One of the major advantages of being an Editor of a publication such as the NOSB is the wide variety of ornithologists one meets, both personally and through the mail and to those in particular I ought to make it clear that my termination of Editing the Bulletin does NOT mean that I am leaving Nigeria, and that the open invitation, to anyone connected with the Society who find themselves in Ibadan to pop in and see me still stands.

Finally, I should like to thank especially the people I have been working with on the Bulletin over the past four years, Bob Sharland and Allan Cook, without whom the Bulletin would never have reached its 5th year. And to wish the new administration the best of wishes for a long and fruitful future series.

All materials for publication, subscriptions and any other business should be directed to Mr P. Hall, Ministry of Natural Resources, Forestry Division, P.M.B. 47, Maiduguri, North-Eastern State, Nigeria.

Roy H. Parker

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BOB SHARLAND

Although the Editor has already noted the loss of Bob Sharland from the Nigerian scene, it is fitting that some further recognition of his contribution to the Society and to Nigerian Ornithology should appear in the pages of the Bulletin. Bob probably got his first taste for tropical birds while serving with the Army in the Burma campaign. In 1949, only three years after he had been demobilised, Bob came to Nigeria as an accountant with the United Africa Company with whom he remained until 1960. During these years he was stationed in various parts of coastal Nigeria, notably Calabar and Burutu. But for the past twelve years he has been continuously in Kano and, with his wife Jane, has offered generous hospitality to all and sundry but, particularly, to those like myself interested in birds. It was during one of my many visits to the Sharlands that Bob first mooted the idea of starting a Nigerian Ornithological Society. Although the infant, born in 1964, has had its struggles for survival, there is no doubt that its existence and the publication of the Bulletin has done much to direct and co-ordinate the activities of ornithologists, not only in Nigeria, but also elsewhere in West Africa.

In the early years, Hilary Fry undertook all the Society's work but since he left Nigeria for Aberdeen in 1966, Bob has been the Secretary/Treasurer while a number of editors have handled the publication of the Bulletin. Bob's greatest contribution to Nigerian Ornithology has been initiating the ringing scheme in 1957. Such has been the success of the campaign that a total of almost 60,000 birds have now been ringed, nearly half yellow wagtails and a further quarter other Palaearctic Migrants. A formidable fraction of this number have been ringed by Bob himself. To achieve such results has meant devotion to the work that is made all the more praiseworthy when one recalls (as I do) that most of the Kano yellow wagtails were captured in one of the city's main middens just outside the city walls! Every footfall was perilous! It must have been most gratifying to Bob as he compiled the Annual Report for the Bulletin, to be able to note the recoveries, recoveries which have had real importance to Ornithology. But, more than any other single person, he has proved that Palaearctic Migrants are as faithful to wintering areas as they are to breeding haunts. I put this forward as a tentative idea in 1957; shortly afterwards Bob proved it so. Another important result has been to show that at least a majority of the yellow wagtails wintering in Nigeria move almost directly north to breed, whereas many previously had thought a strong western factor to be present in the autumn migration direction. One wonders what will become of the Nigerian ringing scheme now that Bob has gone.

Bob has also several first records for Nigeria to his credit. These include the first Cetti's Warbler in the north and the only known Nigerian record of Prinia leucopogon at Calabar. Although not primarily a nester, he has produced several interesting breeding records and it is hoped that now he is not so fully occupied in ringing, he will find time to publish some of these findings in the Bulletin.

Mention was made earlier of the Sharland house in Kano as a rendezvous for ornithologists. But it went a great deal further than hospitality. Bob has been of very great practical help to people passing through Kano. Chief amongst these I will cite the very great help given to John Ash, James Fergusson-Lees and Hilary Fry on their visits to Mallam Fatori on Lake Chad, and to Bob Dowsett during his prolonged stay in the same area. I hope to be briefly back in Northern Nigeria myself shortly, but to pass through Kano without Bob and Jane there will be a traumatic experience!

The Society owes both of them a great deal and it is fitting we should wish them well in the future. We hope they will get the same sort of satisfaction from their new life in the United Kingdom that they must have had while in Nigeria.

John Elgood

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THE BIRDS OF SOKOTO

by

P.J. Mundy and A.W. Cook

Part 2 Passerines

Buckley's Bush Lark Mirafra rufocinnamomea:

14 sightings: from February to August at (h) (i) and once at (b) in June. Probably resident at (h) where its characteristic "drumming" is heard in August.

Rufous-rumped Bush Lark Mirafra nigricans:

A distinctively coloured black and yellow lark. Seen on 2 occasions at (i) in October and November of different years in groups of 5 and 10. They seem to remain in the area for 2 or 3 weeks only. Serle saw a bird at Zaria in December.

Chestnut-backed Finch Lark Eremopterix leucotis:

From September to March at (a)(c)(d)(f)(h)(i) and (d) in July. It prefers (h)(i) where it occurs in numbers up to 50, with the sex ratio generally equal. Breeding at (i) in October (Part 3).

Crested Lark Galerida cristata:

Throughout the year at (a)(b)(c)(d) and at (i) in August and November. Very numerous on fadamas and up to 20 may often be seen at any one time. Song "battles" heard and aggressive behaviour seen in February and March. Two larks will chase each other around a small area (average 30 yards diameter) and then stop to face one another at a distance of 3 feet. One or both will sing vigorously and one bird soon crouches whilst the other stands erect, and suddenly the "croucher" chases the other away.

European Sand Martin Riparia riparia:

From October to March at (a)(b)(c) in groups of 10-20. If the colour of the throat is a reliable character, i.e. white in the European migrant and dusky brown in the African resident, then all our sightings refer to riparia. However, Broadbent (pers. comm.) saw paludicola in Sokoto in April, and Dobbs (1959) also saw paludicola from October to April.

Banded Martin Riparia cincta:

A pair at (i) in September.

European swallow Hirundo rustica:

24 sightings at (b)(c) in September, October, March and April. Small groups.

Ethiopian swallow Hirundo aethiopica:

By far the commonest hirundine, resident at (a)(b)(c)(d)(h)(i) and spreading to (f) in the wet season. Generally in groups of 20 or so, but on 4 occasions numbering more than 100: at (a) in November at (c) in February and April, and once at (c) in March, a group of 500 were perched on the telephone wires. Courtship, i.e. pairs tumbling through the air, seen at (i) in July and juveniles (with a pale rufous forehead but prominent breast patches) there in September; 2 juveniles were perched on a millet stalk, and fluttered their wings and called loudly whenever their parents flew up to them with food. On the approach of a Crow, they flew away. These swallows often drink from the swimming pool.

Lesser Striped Swallow Hirundo abyssinica:

A pair at (h) in June.

European House Martin Delichon urbica:

A single bird at (g) in June.

Blue-Headed Wagtail Motacilla flava:

From 29th September to 12th April at (a)(b)(c)(d)(e)(f) and 5 birds at (i) in December; the season's first Wagtails were seen on 29th September 1970 and 30th September 1971. They show a clear association with wet open areas; generally well dispersed in small groups, though 1000 seen at (a) in February. We have not seen any roosts or flight-lines. Only seldom seen around cattle and usually the birds are in and around scattered trees. Notwithstanding Bannerman's remarks (1953, pp. 826-7), we think we have recognised 4 races (identifications in March): flava, cinereocapilla, thunbergi and flavissima in that order (but see Elgood et al., 1966).

White Wagtail Motacilla alba:

Much less common than the Yellow and sighted 90 times from 17th November to 26th March at (c)(f). Closely attached to pools of water throughout this period. They often jump into the air.

Tawny Pipit Anthus campestris:

Group of 5 birds at (i) in January.

Tree Pipit Anthus trivialis:

Seen at (c) in November, February and March, and at (h) in October. 9 sightings. One bird was seen walking on its tarsi and not its toes!

Brubru Shrike: Nilus afer:

A conspicuous bird aurally as its "pea-whistle" (Bannerman 1953) is unmistakable. Its occurrence is erratic - seen and heard every day for 2 weeks near (e) in March; a pair at (e) in May; a pair near (e) in August; and 1 heard near (e) in December. Probably the same pair and clearly attracted to the woodland at (e) and surrounding woodlands in Government Residential Areas. Presumably resident there.

Gambian Puff-Back Shrike Dryocopus gambensis:

From March to December at (c) and February and August at (g). Probably resident in both woodlands. Always high in trees and often in pairs. Heard singing in June. The woodland at (e) holds 1 or 2 pairs.

Black-crowned Tchagra Tchagra senegalensis:

Resident in the farmland surrounding(g), and at(h); seen occasionally at(a)(c)(f). Its call is distinctive and without it the bird would often pass unnoticed. Breeding at(h) in July (Pt. 3). Not a common bird even in its 2 favoured habitats.

Barbary Shrike Laniarius barbarus:

Resident at(e)(f)(g)(h) and seen once at(c); (e) holds 4 or 5 pairs. Generally seen in pairs and their unique duetted call may be heard throughout the year (rec). It is not so secretive or skulking as Bannerman (1953) describes. It was once seen tearing a weaver's nest to pieces: on another occasion it attacked and killed a Cordon Bleu Estrilda bengala and impaled it upon a thorn (our thanks to Mrs. Poole for the latter observation). One pair in February were seen chasing each other "leap-frog" fashion, both frequently hopping up and down.

Grey-Headed Bush Shrike Malaconotus blanchoti:

Resident at(e)(f)(g), at least 1 pair in each. Generally skulking and seen singly or in pairs. It is at the very north of its range here. Like all our resident shrikes, it has an unmistakable call, a "melancholy bell-like note" (Bannerman 1953), and rather haunting, which often advertises the hidden bird (rec). We have heard it calling in January (perhaps duetting, rec.), June and September. Probable courtship seen in late January - one bird of a pair chasing the other and frequently raising its head. Either bird, or perhaps both, utter a call quite different to the normal, being a rattle followed by a very short whistle, with one or several whistles sounded for each rattle. Such whistles are a sharper form of the plaintive call. On 2 occasions in January, courting birds were on the edge of a small Neem plantation near(f), and they were most conspicuous.

Long-tailed Shrike Corvinella corvina:

Resident at(e)(f)(g), noisy and gregarious. At least 10 birds live in each habitat, with a group of 20 at(g) in October (and including juveniles?). They are usually seen feeding on the ground and when disturbed fly into the lower branches of a tree.

Woodchat Lanius senator:

From 17th September to 12th April at(a)(b)(c)(d)(h) and on the farmland surrounding(e)(f); seen twice at(i), and a juvenile (pale colour) seen at(i) on 28th August. An adult seen on 15th June. This shrike perches motionless on a branch for long periods, and then dashes out to catch an insect in the manner of a flycatcher. 80 sightings of the nominate race only.

European Golden Oriole Oriolus Oriolus:

Single males seen on 27th September and 1st October in separate years. This appears to be the third report of the Oriole in Nigeria (Elgood et al.).

African Golden Oriole Oriolus auratus:

From July to February at(e) and a similar occurrence to that noted by Dobbs (1959). Either single males, or males with 1 or 2 females. Always perched in tree-tops. An auratus male chased an oriolus male in October.

Glossy-backed Drongo Dicrurus adsinilis:

Single birds at(g) in June, September, October and at(f) in January

Swainson's Glossy Starling Lamprolornis chloropterus:

Seen at(e) in January (3 birds), July (50 birds, about $\frac{1}{2}$ being juveniles with spotted brown plumage), August (40 birds, same proportion of juveniles) and November (12 adults). Only seen when they come to roost in the evenings.

Blue-eared Glossy Starling Lamprolornis chalybaeus:

The commonest starling and resident at(a)(b)(e)(f)(g); in the wet season at(h); in the dry season at(d); and on odd occasions at(c)(i). A song "battle" heard in June (rec.), breeding in August (Pt.3), and juveniles seen in July (half of a flock of 30, being blackish-brown in colour). Generally in groups of 20-30, but flocks of 100 seen in February, October and December. Our sightings in the study areas show a diminution in numbers during the wet season, suggesting a movement northwards: -80, 247, 120, --, (observers absent), 45, 72, 51, 19, 150, 98, 140. On one occasion a group of 6 were seen mobbing a Black Cobra, Naja. We have not seen any chalcurns which Serle found nesting here.

Long-tailed Glossy Starling Lamprolornis caudatus:

Its habits are similar to the Long-tailed Shrike's, for the Starling is noisy, gregarious and usually found feeding on the ground. It is associated with woodland and is resident at(e)(f)(g) but also at the more open(b). The birds seen just as noisy in the late evening as during the day. Generally in groups of 10-20, but 40 seen at(e) in June (including juveniles?). As with the Blue-eared Starling, our sightings show a decrease during a part of the wet season -60, 45, 39, --, (observers absent), 72, 65, 41, 9, 22, 55, 51. The woodland at(e) holds about 15 birds which disappear from September to November inclusive.

Amethyst Starling Cinnyricinclus leucogaster:

A male and female pair at(h) in July.

Chestnut-bellied Starling Spreo pulcher:

Widespread but in small groups of 10-15; less common than the Blue-eared Starling. Resident at (c)(g)(h) and occurring occasionally at (a)(d). A juvenile seen in August (yellow bill, brown throat and chest).

Yellow-billed Oxpecker Buphagus africanus:

Found, of course, wherever there are domestic animals, and in our area that means nearly everywhere. Breeding at (i) in July (Pt. 3). This bird has 2 quite clear-cut dispersion patterns: feeding in very small groups up to 6 and quite often singly; roosting in groups of 10 or more but usually of 50-200. A suggested function of communal roosting is that most birds can quickly direct their attention to a food supply the next day (Lack, 1968). In a "wild" situation, this would be useful to the Oxpecker looking for mobile ungulates. But in Sokoto there is never any difficulty in finding domestic animals and so the birds disperse over the area completely. Only once have we seen any animal trying to rid itself of an Oxpecker: a donkey persistently rolling.

Piapiac Ptilostomus afer:

Of uncertain status, but probably resident at (b)(g), these areas having many palms with the birds often to be seen in and around them; also occasionally at (a)(c)(e)(f). Its numbers do drop in some months; our sightings are: -26, 6, 0 freq. (Dreadbent), - (observers absent), 42, 5, 25, 7, 65, 65, 15. Where resident it is in flocks of about 20, but once at (g) in November it numbered more than 50 in a mixed flock with starlings, Long-tailed Shrikes and Grey Hornbills. Red billed birds have been seen in June, October and December. Breeding in June; one parent near a nest scolded a Harrier Hawk until the latter moved away (rec.). Also seen scolding a Red-necked Kestrel.

Pied Crow Corvus albus:

Seen everywhere, but more particularly as noted by Bannerman (1953) near human habitation. It is resident in all our areas; but seen in ones or twos only, at (h)(i). Breeding begins in late April or early May (Pt. 3). There is as yet no good evidence to support the notion that birds pair for life (but see Lamm, 1958). Nor is it now true that the Crow is heavily parasitised by the Great-spotted Cuckoo around Sokoto (see Mundy and Cook, 1971a).

True to its genus the Pied Crow is of unfailing interest and no doubt appeals to humans because of its intelligence (and Aggression?). Both of us have hand-reared nestlings and the fledglings then remain near the house until the next breeding season. The number of living things that Crows will attack is legion - humans, donkeys, goats, all raptors and especially eagles, ~~and~~ small hawks (and also once a Lanner) and owls; in or out of the breeding season. Whilst studying Crows we often found that one adult of a nesting pair

would see our car in the distance and come to meet us, scolding all the way even over a distance of 200-300 yards. When we examined the nests, the parents would swoop over us and call in an odd manner that within minutes produced a large flock of equally angry Crows.

Crows sometimes wash their food before eating it. Once we heard a Crow mimic an Egret. Neither of our hand-reared birds came near to talking.

Common Garden Bulbul Pycnonotus barbatus:

Resident at (e)(f)(g) and seen on occasions at (c) and in the wet season at (h). Copulation seen in January and February. At least 5 pairs occur at (e) (rec.).

Whinchat Saxicola rubetra:

3 sightings of single birds at (d) in October and December.

Wheatear Oenanthe oenanthe:

From 10th October to 21st March in all our areas. 120 sightings and a common bird in groups of 1-3. Some males have their breeding plumage in early March.

Spanish Wheatear Oenanthe hispanica:

5 sightings in February and March at (f)(g)(h), 4 white- and 1 black-throated birds. Once we saw oenanthe chasing hispanica in February. In contrast to the former, hispanica perches in trees.

Desert Wheatear Oenanthe deserti:

A single male at (f) in January.

Red-tailed Chat Cercomela familiaris:

Single birds seen at (h) in February and March.

Ant Chat Myrrococcyz aethiops:

Resident groups at (h)(i) numbering at least 20 and 10 birds respectively; also seen at (a)(b)(f); and odd birds are always found at the many laterite quarries around Sokoto. Generally in loose groups within 800 yards of their resting/roosting tunnels and rarely ranging further away. As Bannerman (1953) notes, their voice is delightful, and they call throughout the year (rec.). Courting begins in May, but egg-laying does not begin until the rains have properly arrived (Pt. 3).

These birds find their insect food on the ground but are also adept at catching flying termites. They like to perch on corn stalks, bushes and trees. We have seen them react as a group to a flying Black Kite and Shikra, by raising an alarm call and either darting into a bush or displaying on the ground. Yet they did not mob a Black Cobra Naja (which also uses their tunnels and is no

doubt a nest predator) which was being mobbed by the Blue-eared Starling. Once we saw a Chat chasing a Woodpecker several times around a tree.

Rock Thrush Monticola saxatilis:

2 sightings: a female at (i) on 19th November and a male in bright plumage on 19th March on old farmland at the town's edge.

Blue Rock Thrush Monticola solitaria:

4 birds seen at (i): a female or immature on 19th November, a male on 10th January, and 2 females on 13th February; all among rocks. We are confident of our identifications here because of direct comparison with the resident Ant Chats. Elgood et al. (1966) have only one previous record. Dobbs (1959) saw it in April, but was not credited by Elgood.

European Redstart Phoenicurus phoenicurus:

Not so common as the Wheatear, about 60 sightings. From 27th September to 25th March it is resident at (e), often in pairs. In October and March we have the biggest counts. Also seen occasionally at (b)(c)(f)(g)(h). It perches on the lowest branches of trees and then makes a sudden dash to the ground. Often to be seen chasing each other.

Black Scrub Robin Cercotrichas podobe:

Only seen at (h) in February, August, October and November, either singly or in pairs. Always seen at the same place within (h). Probably resident.

Rufous Warbler Cercotrichas galactotes:

Rather few sightings (30) for this conspicuous bird, but at least 2 pairs are resident at (h) and it may be resident at (i). Though we visited its habitats throughout the year we did not see it in August and September, a feature too of Dobbs' (1959) observations; perhaps it moves northwards with the rains. Courtship seen in June (ie. tail-raising, wing dropping and chasing).

Snowy-crowned Robin Chat Cossypha niveicapilla:

A secretive bird, sighted 8 times: at (f)(g) in February to August where it is perhaps resident (cf. Fry 1970). We have never seen it at (e) where it was once sighted by Dobbs (1959), and this is probably due to drainage development and undergrowth clearance. At (f)(g) it prefers the thick, moist patches.

Sudan Brown Babbler Turdoides plebejus:

A noisy bird (rec) and gregarious but very quick to fade away in to the woodland gloom when it notices an observer. Resident at (f)

(g), 10-15 birds each, and a group of 6 at (e) in December. The whole head is grey and its tail is held downwards - Bannerman's colour picture (1953 opp p.840) is misleading in these aspects. The birds take large hops when on the ground.

European Reed Warbler Acrocephalus scirpaceus:
A single bird at (f) on 15th March.

Icterine/Melodious Warbler Hippolais icterina/polyglotta:
Single birds at (c) on 25th October and 28th November. According to Elgood et.al. (1966), the Melodious is more likely to be seen.

Olivaceous Warbler Hippolais pallida:
10 sightings: 1 bird at (g) on 16th October; group of 6 at Amanawa on 29th October, and group of 3 at (e) on 30th November.

European Whitethroat Sylvia communis:
From 22nd November to 18th March at (c)(d)(e)(f)(g)(h)(i).
Usually singly, but several seen in the same area together in March.
No Sylvia curruca seen.

Subalpine Warbler Sylvia cantillans:
15 sightings from 25th September to 21st March at (c)(e).

Willow Warbler/Chaffinch Phylloscopus trochilus/collybita:
50 sightings at (e) from 19th October to 8th February. 20 birds were seen on this last day.

Wood Warbler Phylloscopus sibilatrix:
15 birds at (e) on 25th October, then sparingly to 5th December.
One bird at (e) on 30th August.

Rufous Grass Warbler Cisticola galactotes:
Seen occasionally through the year at (b)(c)(d). One bird was seen carrying nest material in October.

Red Pate Grass Warbler Cisticola ruficeps:
Conspicuous by stance, atop a tree, and song (rec) in the wet season and seen at (h) from July to October; 2 or 3 singing birds.

Gold Coast Fantail Warbler Cisticola juncidis:
Resident at (c)(b)(c)(d). "Zitting", the East African name, is apt

West African Prinia Prinia subflava:
11 sightings: at (g)(h) in June to August and (d) in December.

Grey-backed Camaroptera Camaroptera brachyura:
Resident at (c)(g)(h) but never more than 1 or 2 pairs seen at

each. Courtship begins in July --both male and female produce a fast clicking sound from their vibrating wings and both continuously tweeter. The female sits on a branch whilst the male hops to and fro from one branch to another, 6 ins. to 1 ft. apart, his tail spread into a fan. The female flies off, the male follows, and the actions are repeated. Also in July, fighting seen - 2 birds grappling together tumbled out of a tree to the ground.

Grey-backed Erenomela Erenomela icteropygialis:

22 sightings: probably resident at (e)(g)(h). Generally singly or in pairs.

Green-backed Erenomela Erenomela pusilla:

Twice seen in groups of 8 at (d)(e) in March and April. They are altogether brighter in the field than icteropygialis as well as seeming more social.

Senegal Crombec Silvietta brachyura:

10 sightings: probably resident at (e)(g)(h), singly or in pairs.

Spotted Flycatcher Muscicapa striata:

Single birds at (e) on 27th October and 5th December.

Senegal Puffback Flycatcher Batis senegalensis:

Single males at (h) in June and October.

Paradise Flycatcher Tersiphone viridis:

12 sightings at (e)(f)(g) from June to October and once in January. It is probably resident in all 3 areas, but is noticed more in the wet season because it is breeding and very noisy. Both brown and white phases have been seen: white males (4 times, one with a little brown in the tail) and brown females (6 times) - cf. Bannerman (1936) who notes all females as brown, and the white males as common in Northern Nigeria. In June a male was seen flitting between 2 trees for $\frac{1}{2}$ hour and calling persistently in 2 notes. Also in June a female nodd a Pearl Spotted Owlet until it left its perch. Again, in June a pair were seen displaying together with much calling (rec), flapping of wings and flying to and fro.

Pygmy Long-tailed Sunbird Anthreptes platyura:

Recognised on account of the males' long tails from October to March and always carefully distinguished from Nectarinia pulchella. Only 5 positive sightings in that period. Dobbs (1959) records it in eclipse plumage from April to August, though by implication.

Scarlet-breasted Sunbird Nectarinia senegalensis:

10 sightings of males throughout the year at (b)(c)(f) and apparently associated with fadama and stream vegetation. A pair in June.

Beautiful Long-tailed Sunbird Nectarinia pulchella:

The commonest sunbird, found in abundance at (e)(f)(g) and whenever there are blossoming trees; in the wet season at (h)(i); and on odd occasions at (b)(c)(d). The woodland of (e) holds at least 10 pairs. The species seems gregarious only inasmuch as several may gather in a tree with many blossoms; otherwise they are met with singly. The males in eclipse plumage retain green metallic wing coverts and are then found either with or without their long tails; perhaps the short-tailed birds are first-year immatures? Assumption of breeding plumage begins in March and is complete by May, and is lost during October. Aggression and courtship also begin in March; males chasing and scolding other males, and courting females with outspread wings and tail. Twice we have seen males courting 2 females together. Juveniles (with a vertical black streak on the throat and upper chest) are seen from July to October.

Yellow-bellied Bunting Emberiza flaviventris:

Resident at (h) and seen singly and in pairs. Juveniles (with a yellow crown between the 2 top stripes) in August. No Emberiza forbesi seen.

Rock Bunting Emberiza tahapisi:

Resident at (f)(i) in numbers around 50 each; occasionally at all our other areas and a group of 50 at (c) in June on freshly dug ground. Generally conspicuous because of their tweetering song throughout the year; males are more brightly coloured than females. Juveniles (with red bills) seen in August.

Yellow-fronted Canary Serinus mozambicus:

Seen only a few times at (h) from February to August.

Grey Canary Serinus leucopygius:

Group of 4 at (h) in October.

Slender-billed Weaver Ploceus luteolus:

Males begin assuming breeding plumage in March and from then to October this weaver is resident at (b)(e)(g)(h)(i) and seen occasionally at (c)(f). Usually in pairs and always in trees. Widespread. Breeding from June (Pt. 3).

Vitelline Masked Weaver Ploceus velatus:

From June to October it is widespread, occurring at (b)(c)(d)(e)

(g)(h). It breeds in a variety of places-over water, in arid parts of the bush, and around human habitation (cf. Morel and Morel 1962) -from July to October. Generally it seems to be a solitary nester, one male building and destroying a group of nests and attracting between 1 and 4 females. As Bannerman emphasises (1953, pp. 1379-80) males of velatus and heuglini are difficult to distinguish, and after many hours watching both species in the field differentiation can be seen on 6 points: -nest shape, eye colour, black of throat, wing colour, chest colour, forehead colour; in that order of usefulness (Pt. 3).

Heuglin's Masked Weaver Ploceus heuglini:

Seen from June to October and positively identified at only 5 places: in a Nigerian family's compound (every year); close to the Catering Rest House dining room; at the gates of the new Capital School; in widely spaced trees at (i); in an acacia overlooking the Sokoto river. Hence, three of these sights are "protected", and indeed the few nests at the School gates were clustered around a wasps' nest (see Elgood and Ward 1960, and note that our second group above is at the same site as their no. 4). Known to breed at 2 places (pt. 3), the first and last detailed above, both colonies with more than 20 nests; up to 10 nests at the C.R.H., School gates and (i); immatures' nests at (i) also. Apparent polygamy in our first site. Thus at Sokoto, the breeding ranges of heuglini and velatus overlap (cf. Hall and Moreau 1970).

Village Weaver Ploceus cucullatus:

Males are in breeding plumage from May to early November. This is the only weaver we can recognise outside the breeding season, due to its large size and bill, and red eye. It is resident in all our areas in variously sized groups, but only occasionally seen at (h)(i). This bird breeds in 2 main situations, over water and close to human habitation, even inside courtyards. Breeding seems to be initiated by sufficient rainfall (Pt. 3), though probably by rain's effect on the vegetation and invertebrata (but cf. Collias and Collias 1970). Colonies are not large, averaging about 20 males; one colony was in the same trees near the bridge over the river Rima as noted by Dobbs (1959). There is no dependence on Baobab trees (cf. Bannerman 1953, p. 1383).

Black-headed Weaver Ploceus melanocephalus:

Breeding males from early August to early October at (a)(c). A colony of 2 males, 5 females and 9 nests at (c) in September to October. (Pt. 3). Only seen by running water. Very much less common than in the 1950's (see Dobbs 1959).

Black-faced Dioch *Quelea quelea*:

Seen almost throughout the year in all our areas except (i) though preferring the fadamas and the farmland around (f)(g). Our monthly sightings indicate an exodus in July (cf. Ward 1965), but also in September and October: -100, 155, 360, -, -, (observers absent), 80, 3, 98, 0, 17, 72, 50. Generally in flocks of 20-30 with sex ratio equal; their species is known to be monogamous (Ward, op.cit.). No evidence of breeding.

Yellow-crowned Bishop *Euplectes afer*:

The males are in breeding plumage from mid-July to early November and require water for nesting over, this fact probably determining the comparative lateness of their onset of breeding. During these months they are seen at (a)(b)(c), and surprisingly one male was seen at (h) in August. In the non-breeding season they are present in the rice fields of (a) in their thousands. In courtship, seen in August the male chases the female fluffing himself up considerably. Other-wise he travels around his territory like a whirring bullet.

Orange Bishop *Euplectes orix*:

Of much wider habitat tolerance than afer and not at all tied to water, hence the orix male assumes breeding plumage with the onset of the wet season rainfall and not with the amount of ground water. This comes to a full month before afer and lasts to early November. The Orange Bishop is then found in all our areas except (f), generally on farmland amongst corn and millet. 1-20 males may be seen in one place together at a time.

White-billed Buffalo Weaver *Bubalornis albirostris*:

Resident at Ananawa where it nests. It happens not to nest in any of our areas and is only occasionally seen at (a)(f)(g)(h), with a flock of 24 being seen at (g) in November. It seems then to be closely associated with its breeding sites throughout the year. On 5 occasions, in January, February, July and August, we have seen one or more Weavers among a group of starlings, always Spreo pulcher and sometimes also Lamprotornis chalybaeus. On one occasion only have we seen the Weaver at a time when there were no starlings around. The relationship close to their colonies may well be different.

Breeding at the Ananawa colony of 30-50 birds begins in late June; this colony overlooks a Nigerian family's compound and is used every year. Nest-building or -repairing continues until late October and may well persist throughout the year. Juveniles begin to appear in August. At a distance of 200 yds., from another colony 2 adults were seen feeding 2 juveniles which were sitting in a bush. These fledglings were brown with white spotting on the back, and white edging to the primaries, the bill was dark with pink edges and the inside-mouth was red. Soon they jumped to the ground and began

foraging for themselves.

Sparrow Weaver Plocepasser superciliosus:

3 sightings at(h) in July and August; building a grass-ball nest

Grey-headed Sparrow Passer griseus:

Resident everywhere and inside the town. Seen singly or in groups of up to 50. Nesting in August to October in tree-holes and under roofs. Once seen catching flying termites.

Scaly-fronted Weaver Sporopipes frontalis:

Resident at(h). Of uncertain status, but 20 seen in scattered groups in January. Otherwise usually seen in very few numbers. Nest-building in July and August (later abandoned).

Pin-tailed Whydah Vidua macroura:

Rarely seen for such a conspicuous bird, perhaps because its Waxbill host (q.v.) is not common around Sokoto. From early June to early October males or pairs are encountered at(b)(c)(d)(f)(g)(h)(i). On 2 occasions groups were seen at(b): on 13th June, 2 flocks each numbering about 30 birds, with the pied males outnumbered by females by 4:1, and a couple of males courting by flying above a female and fluttering down; on 15th October a flock of 10 males some half of which were lacking the long tail feathers, suggesting the pattern of moult.

Indigo Finch Vidua chalybeata:

A common bird, now known to parasitise the Senegal Firefinch (Morel and Morel, 1955). Like its host it is found in every habitat except perhaps in the town itself (unlike its host). Males seen coming into breeding plumage in June and July, but odd males occur throughout the year, and its host after all breeds for 9 months of the year (Morel 1964). Our sightings of males are: -4, 5, 10, -, -, (observers absent), 60, 4, 20, 10, 15, 5, 2. On 2 Occasions, both in June large groups of 20 and 40 birds were seen, the great majority being males.

Broad-tailed Paradise Whydah Vidua orientalis:

Males in breeding plumage are seen from July to early December and only at(g)(h), singly or rarely paired with one female. Its Pytilia host (Hall and Moreau, 1970) is only seen at(h). As Bannerman (1953) notes, the males have a habit of flying from the top of one bush or tree to the top of another, usually 100 yds. or more apart. At Haru, lat. 12° 15' N, males have been seen in breeding plumage in February; as with the Vidua macroura, one male orientalis lacked the long tail feathers.

Cut-Throat Weaver Amadina fasciata:

From September to January at(h)in groups of 5-50;and at(c)in June, 3 males among a mixed flock of other weavers. One flock of 30 in October comprised 24 males and 6 females. No evidence of breeding. Like the Silverbill, this Weaver is known to lay in old weavers' nests.

Melba Finch Pytilia melba:

Seen at(h)in 5 months of the year and perhaps resident there; also in a nearby Forest Reserve. Often in pairs. Nest building in July. Generally seen skulking about on or near to the ground.

Black-rumped Waxbill Estrilda troglodytes:

Seen throughout the year, but seems to move around as it is not resident in any one locality continuously. Seen at one time or another in all our areas except(c)(c), sometimes singly, usually in groups averaging 10 birds. On 4 occasions, groups of 20 or more seen (January and February). The Waxbill is seen in the breeding season (ie. the rains) only at(c)(h)(i), and its parasite Vidua macroura (Hall and Moreau, 1970) is seen there too.

Red-cheeked Cordon Bleu Estrilda bengala:

Resident in large numbers inside and around Sokoto. Found in all our areas except(a)in groups up to 20, and nesting in September and October (Pt.3). Very often feeding in a mixed group with the Senegal Firefinch. The sex ratio of bengala flocks seems to vary a great deal.

Senegal Firefinch Lagonosticta senegala:

Like the Cordon Bleu this bird may be found anywhere. Generally seen in smaller parties than Estrilda bengala and often in pairs. Nesting in September and October (Pt.3). Very often feeding with the Cordon Bleu.

Quail Finch Ortygospiza atricollis:

One bird seen, tussocks at(a)in February.

Warbling Silverbill Lonchura malabarica:

A widespread bird and resident in all our areas; usually in groups of 5-20, but once a group of 50 at Ananawa in July. Copulation seen in June and breeding known from September to January (Pt.3). These birds often lay in old weavers' nests (van Someren and van Someren 1945, but cf. Morel and Morel 1962, p.172), and in a study of their nesting habits we found that the Silverbill built for itself only 2 nests out of 39 used (Mundy and Cook in prep.). Two birds seen allopreening in August.

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BIRD NOTES FROM THE PLAINS SOUTH OF LAKE CHAD

WINTER 1971-1972 PART 2

by

D.A. HOLMES

Clapperton's Francolin *Francolinus clappertoni*:

Moderately common in thorn scrub. Well-grown chick seen on 28th March.

Common Quail *Coturnix coturnix*:

Few records of solitary birds, all before early December.

Grey-breasted Helmet Guinea-Fowl *Numida meleagris*:

After seeing the abundance of this species in the Waza game reserve in N. Cameroun, we must assume all guinea-fowl have long since been eaten in our area. The only evidence found of wild guinea-fowl was of one feather picked up in a well-wooded area of the northern sand ridge.

African Moorhen *Gallinula chloropus*:

Several records along the river in December, when the water was high.

Demoiselle Crane *Anthropoides virgo*:

Common visitor to the clay plains, first seen on 21st January, thence regularly until the last few left on 4th March. They were seen most regularly in the area between Marte and Logomani, feeding

in the harvested sorghum fields bordering clay plain areas. Generally they would rise or be disturbed about mid-morning and slowly drift off northwards in the direction of the lake in leisurely, circling, scaring flight, calling all the time. Presumably they would return to the fields during the night. The largest flock seen had an estimated 650 birds, but numbers in the Marte area may have approached 900.

Crowned Crane Balearica pavonina:

Common in the clay plains, although never seen in the Marte area. In January they became concentrated in the swamps south of Logomani (an estimated 200 birds), and later confined to very small numbers around the Gambaru irrigation scheme. An estimated 10,000 birds in the swamp west of the resthouse at Waza, N. Cameroun, in late February, shows where this species goes in the dry season.

Sudan Bustard Otis arabs:

Rather sparse. Perhaps a dozen sightings altogether (some probably repeats), principally from wild sorghum areas of the clay plains or the edges of surrounding thorn scrub.

Denham's Bustard Neotis denhami:

Only one confirmed record, of a pair in a grassy sandhills area near Ngala in December.

Savile's Pygmy Bustard Eupodotis ruficrista:

RAJH reported seeing a pair in sorghum crops near Marte on 13th November.

Senegal Bustard Eupodotis senegalensis:

Common in thorn scrub areas. Generally seen in pairs but occasionally up to 4 together. Only when we identified the call in February did we realise how common they are.

Black-bellied Bustard Eupodotis melanogaster:

The only one seen in the project area was one male near Marte on 13th November (RAJH). Another male was seen near the lake margins in early February.

Lily Trotter Actophilornis africanus:

Common along the river and lake margins, also present on some smaller swamps. None were seen after mid-January, but few visits were made to suitable areas after this time.

Senegal Thick-knee Burhinus senegalensis:

Two records: two birds along a tree-lined stream in the clay plains in late October, and one along the river on 26th March.

Spotted Thick-knee Burhinus capensis:

3 or 4 seen together in dense thorn scrub on 29th October and 1st November.

Spur-winged Plover Vanellus spinosus:

Common generally early in the period at which time it is associated with other species of the group, but later becoming confined to riverine and other wet areas.

Black-headed Plover Vanellus tectus:

The commonest of the group, and the only one generally distributed throughout the dry season, showing no particular preference for water.

Senegal Wattled Plover Vanellus senegallus:

A few present among the plovers up to 7th November only.

Little Ringed Plover ~~Vanellus~~ Charadrius dubius:

Moderately common especially near water and village wells. Still present on 27th March.

Kittlitz' Sand-Plover. Charadrius pecuarius:

Moderately common, most frequently seen near village wells.

Black-tailed Godwit Limosa limosa:

One on 26th October, and a party of some 30 in a small swamp on 23rd November. An unidentified godwit seen flying north on 3rd March.

Greenshank Tringa nebularia:

The commonest of the group, in small numbers in suitable habitat. Still present on 26th March.

Marsh Sandpiper Tringa stagnatilis:

Possibly somewhat overlooked. 3 identified mid-December, and one along the river on 26th March.

Wood Sandpiper Tringa glareola:

Moderately common in suitable habitat. Still present on 27th March.

Green Sandpiper Tringa ochrophus:

Small numbers present in suitable habitat. Still present on 27th March.

Common Sandpiper Tringa hypoleucos:

One or two seen along the river on 26th and 27th March.

Redshank Tringa totanus:

1 record only, of at least 1 in a small swamp near Ala on

23rd November.

Dusky Redshank Tringa erythropus:

Small numbers present in seasonal swamps in late November and December.

Common Snipe Gallinago gallinago:

A few records only, but probably quite common in suitable habitat.

Little Stint Calidris minuta:

Quite common in suitable habitat. Still present along the river on 27th March.

Ruff Philomachus pugnax:

Abundant, especially in the Ngala area. From October to December, immense flocks were present in the short grass areas of the clay plains (ie. south of Ngala), probably some 10,000 in some flocks. In the evenings there was a steady stream of small parties of Ruff down-river, presumably to roost near the lake, returning at dawn. Numbers decreased later in the dry season, but a few thousand were still present around the Gamberu irrigation scheme, feeding especially on freshly watered fields.

From December onwards there was a small but significant proportion (ca. 2%) of birds apparently partly albino, with white heads and white mottling on the wings.

Black-winged Stilt Himantopus himantopus:

Common in wet areas.

Avocet Recurvirostra avosetta:

1 present at shallow pools in the Ngala area from 3rd November to 2nd December.

Egyptian Plover Pluvianus aegyptius:

A few present along the river and seasonal streams up to the end of November.

Temminck's Courser Cursorius temminckii:

A party of 4, believed to be a family party, near Marte on 24th November, and a single bird on 26th November, are the only records.

Pratincole Glareola pratincola:

Very common up to December, with flocks of several hundred often associating with Ruff on the short grass clay plains. Fewer present latterly, though in early February they are common around the lake margins, and smaller numbers remained on the clay plains

through to March. All the birds examined had the chestnut axillaries of this species.

Grey-headed Gull Larus cirrocephalus:

One record only, of 3 or 4 along a seasonal stream on 26th October.

Gull-billed Tern Sterna nilotica:

Small numbers present along the river probably throughout the period. On 11th February I was surprised to come across a party of 30 sitting on the ground, in dry and barren clay plains near Marte.

White-winged Black Tern Sterna leucoptera:

One of the commonest migrants, common at small pools or swamps up to December, after which becoming rarer, although a few remained on the Gambaru irrigation scheme, and several were seen near the lake in early February. This was the only species of the group we identified.

Chestnut-bellied Sand-Grouse Pterocles exustus:

Common and only species identified in the area. Present in small flocks in November, later becoming distributed into smaller parties.

Speckled Pigeon Columba guinea:

Common around villages.

European Turtle-Dove Streptopelia turtur:

Fry (1970) on his visit to Waza game reserve in N. Cameroun in November 1969 made an estimate of 100 Turtle-Doves per square mile or a total of 60,000 within the park. On our visit there from 22nd - 24th February, I would have thought this figure to be conservative with big flocks around all the water holes. It is significant that J.A. Button (pers. comm.) noticed no such flocks there in late January, suggesting that Waza serves more as a staging post than a wintering ground. In the evenings we saw big flocks flying off north at height.

In mid-February I was told of big northward evening movements over Ngala of birds that I believe to be this species. However, very few were seen in the west of the area (at Marte or Dikwa), except a few small parties in March, suggesting that the route from Waza northwards towards the lake is the main migration path. A small passage was noted along the river on our last evening, 27th March. These migrating birds generally fly at some height in flocks of 100 or so, and their identity is by no means immediately apparent.

Mourning-Dove Streptopelia decipiens:

Common and the most generally distributed of the doves. It has a confusing variety of notes, one very similar to S.roseogrisea.

Vinaceous Turtle-Dove Streptopelia vinacea:

Abundant in thorn scrub, especially the better wooded areas, but not often seen away from such habitat, except perhaps when watering. The characteristic call of this dove is the most monotonous of all the doves, the "better-go-home" call uttered at the rate of about one per second.

Rosy-Grey Dove Streptopelia roseogrisea:

Common in thorn scrub although it was not until February that we were satisfied with its identification. It is a common visitor to village waterholes. The call is a monotonous "ku-krrrr", the second syllable rising and falling; not as harsh as the note of S. vinacea but repeated with the same monotony, about three per seven seconds. This distinguishes the call from a similar but softer note sometimes uttered by S. decipiens, which is given more slowly and at irregular intervals.

Laughing Dove Streptopelia senegalensis:

Common in thorn scrub, with a distinctive call. On 25th March a nest had one egg and one newly hatched chick. The tiny nest was built of dry grass, about three feet from the ground in a low bush.

Namaqua Cena capensis:

Very common in thorn scrub.

Black-billed Wood-Dove Turtur abyssinicus:

Quite common in the better-wooded riverine areas. In late March one turned up in the bare scrub of our Ala camp, and this at least was the black-billed form, but I cannot be sure of the others.

(Yellow-bellied Fruit-Pigeon Treron waalia:

Seen in Waza, N. Cameroun. Its presence in our area is attested to by some caged birds seen at Gambaru agricultural show).

Long-tailed Parakeet Psittacula krameri:

Small numbers present along the river and better wooded areas along the northern sand ridge.

Grey Plantain-Eater Crinifer piscator:

Parties of up to 6 birds occasionally seen along the river.

Great Spotted Cuckoo Clamator glandarius:

Sparse, with four records only, all of single birds by the river or in thorn scrub. On 15th December, a full-grown immature was being

fed by Glossy Starlings.

Didric Cuckoo Chrysococcyx caprius:

Sparse, with three records only, October to December. The call was heard in October. On 23rd October an immature was seen being fed by weavers.

Senegal Coucal Centropus senegalensis:

Common in damp thickets, but also seen quite frequently in thorn scrub far from water.

Barn Owl Tyto alba:

The common owl of the area, heard most nights, probably living in both trees and buildings. Never seen hunting by day. European and African text-books are misleading on the call which to my mind is never the wild shriek quoted. Rather it is a sort of "shrilling" note, often quite low and soft (except when perched on one's tent in the night!). Being so long since I have heard Barn Owls in the U.K., it was not until February that we identified this bird. I then assumed the call of the African bird was different (less of a shriek) to that of the European bird, so it is interesting to add that I heard a very similar call on my second night back in U.K.

White-faced Owl Otus leucotis:

One (sometimes more) turned up at our Ala camp at the end of February, and was then seen or heard on most nights. The call is low and soft, generally a "who whooo", the second note rising and falling, and rather dove-like, but there were variants, one a sort of stuttering "who-co-oo-oo".

Spotted Eagle-Owl Bubo africanus:

A pair present in a wooded grove beside the river, seen in November and January.

Long-tailed Nightjar Caprimulgus climacurus:

Common along the river and to a lesser extent in thorn scrub. This is the only nightjar we identified, although small, pale nightjars were common along a jeep-track in mid-November. The churring song is rather similar to that of the European Nightjar Caprimulgus europaeus, only quieter and lacking the pitch alternations.

Little African Swift Apus affinis:

Common in towns and villages (not closely examined for identification).

Blue-naped Mousebird Colius macrourus:

Common in thorn scrub, almost always in small parties of up to

a dozen birds.

Pied Kingfisher Ceryle rudis:

Common along the river and lake shores.

Malachite Kingfisher Alcedo cristata:

Common along the river (and small pools before they dried up)

Senegal Kingfisher Halcyon senegalensis:

Two confirmed records only, in late October, in wet scrub areas. Possibly it moves out of the area during the dry season.

Striped Kingfisher Halcyon chelicuti:

Common in better wooded areas of thorn scrub, and near the river. Readily overlooked, until the distinctive call of "tea-cher tea-cher" (the second syllable trilled) is known.

Grey-headed Kingfisher Halcyon leucocephala:

Fairly common, October to mid-December only, chiefly along the river but also at other wet sites.

Blue-cheeked Bee-eater Merops superciliosus persicus:

Recorded only between 17th December and 19th February, when very small numbers seen commonly, almost daily in February, invariably flying slowly in a northerly direction. Indeed only once was one seen to perch. It is unlikely that I should have overlooked this bird at other times, being familiar with it in other countries, especially its distinctive call note.

Little Green Bee-eater Merops orientalis:

Only once encountered within the project area (late November, RAJH), probably owing to its preference for well-wooded areas (for example in and near Maiduguri).

Carmine Bee-eater Merops nubicus:

Common generally but becoming more local as the dry season develops, especially favouring wetter localities.

White-throated Bee-eater Merops albicollis:

Several present in October, last record 1st November.

Least Bee-eater Merops pusillus:

Common along the river and lake shores, also encountered in dry areas. A small party took up residence at our dry camp site at Ala in mid-March.

Red-throated Bee-eater Merops bullocki:

A small colony discovered along the river in mid-December,

but not seen subsequently.

Abyssinian Roller Coracias abyssinica:

Very common in thorn scrub, the only roller identified.

Hoopoe Upupa epops:

Common, not sub-specifically identified.

Kakelaar Phoeniculus purpureus:

Common in parties of up to a dozen, often noisy.

Lesser Wood-Hoopoe Phoeniculus aterrimus:

Some half dozen records, generally in pairs but once a small party. The call was heard occasionally, a "weeo" note repeated generally three times, a low and soft note that I first mistook for a distant raptor. It also uttered a "kuk kuk kuk" in flight.

Grey Hornbill Tockus nasutus:

Very common. Not as gregarious as the next species.

Red-beaked Hornbill Tockus erythrorhynchus:

Probably greater numbers than the previous species, but has a slight preference for better wooded and riverine areas. Usually in loose parties. One bird seen in December with a grossly long and downcurved bill.

(Ground Hornbill) Bucorvus abyssinicus:

The only record is of two in hilly country near Mokola, N. Cameroun).

West African Barbet Lybius vieilloti:

A common bird of wooded scrub areas.

Yellow-fronted Tinker-Bird Caprimulgus chrysoconus:

Common, in better wooded areas than the previous species.

Yellow-breasted Barbet Trachyphonus margaritatus:

Heard or seen quite commonly in wooded areas and scrub up to mid-December, after which absent (unless silent and hence overlooked)

Grey Woodpecker Mesopicus goertae:

Common in all variety of wooded habitats, and the only woodpecker identified.

to be continued

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BIRD NOTES FROM REPUBLIC du TOGO

by

Netta Robinson

Ranging over a period of one year, regular observations in the lagoon area of Lome commenced in October 1970, one month after arriving in Togo, and continued once and often twice and thrice weekly until 21st September 1971 with the exception of June when no visits to the area were made and only one visit recorded in August. A sojourn in U.K. between September 1971 and January 1972 intervened. Since watching resumed, several species not previously recorded have been added to the list and are attached.

A description of the habitat of the area will be included in some notes on a roost of Pied Kingfisher Ceryle rudis currently in preparation.

Lome (06° 07' N., 01° 13' E), experiences the dry coastal savanna type climate and conditions of the scrub and grasslands which extend eastwards from Accra. Annual rainfall averages 29 inches. Baobabs Adansonia digitata occur with frequency and extend inland almost to Palime, 121 km N.W. of Lome where, near to the mountains, the environment becomes Equatorial with an annual approximate rainfall of 59 inches.

Nomenclature follows White C.M.N. (1960-65) A Revised Checklist of African Birds.

Long-tailed Shag Phalacrocorax africanus: 30/3 one bird.

Pelican thought to be Pelecanus rufescens: 13/11 one bird.

Grey Heron Ardea cinerea: First recording of this species made on an evening visit to lagoon on 20th May. One bird. On 28th May, two birds present.

African Great White Heron Egretta alba: Observed 19/11, 22/1, 9/2, 11/3, 17/3, 25/3, 13/4, 22/4, 20/5, 28/5. On dates following 11/3 all birds were seen to have yellow bills.

Little Egret Egretta garzetta garzetta: 13/11, 19/11, 23/11, 17/12, 22/1, 13/2, 6/3, 11/3, 17/3, 25/3, 13/4, 19/4, 22/4, 13/5, 9/2.

West African Reef Heron Egretta garzetta gularis: 19/4, 22/4, 13/5.

Squacco Heron Ardeola ralloides: 28/11, 1/12, 17/12, 22/1, 9/2, 13/2, 6/3, 11/3, 17/3, 25/3, 30/3, 13/4, 19/4, 22/4, 30/4, 14/5, 15/5, 20/5, 28/5, 31/7, 7/9, 21/9. A Heron often seen in flocks of up to forty birds flying up and down stream at sundown, the strongest movement is eastwards. Present throughout the year.

African Green-backed Heron Butorides striatus: 12/10, 22/4, the bird on the last date was extricated from a fish trap. It was lamed but was able to fly and swim to a small islet in the lagoon. Further observations: 15/5, 28/5 a pair, 3/7, 7/9, 21/9.

Red-necked Little Bittern Ixobrychus minutus: 13/5, 6/7, 19/7, 22/7, 23/7, 31/7.

African Dwarf Bittern Ixobrychus sturmii: 30/3, 19/4, 22/4.

White-faced Duck Dendrocygna viduata: 22/4 eleven birds counted. Seen only with absolute certainty on this one date.

Black-shouldered Kite Elanus caeruleus: 3/7.

Black Kite Milvus migrans: Present throughout the dry season.

African Crane Crex egregia: In April a captive bird seen.

Black Crake Limnocorax flavirostra: 23/11, 28/11, 1/12, 17/12, 22/1, 25/3, 13/4, 19/4, 22/4, 30/4, 13/5, 14/5, 20/5, 28/5, 3/7, 22/7, 7/9, Seen to be nest building in March.

Purple Gallinule Porphyrio porphyrio: 23/11 only one positive sighting although this species was thought to be glimpsed quite frequently passing through the long reed grasses of the sudd.

Lesser Gallinule Porphyrio alleni: 20/5

African Moorhen Gallinula chloropus: 13/4, 19/4, 30/4, 13/5, 15/5, 20/5, 3/7, 6/7, 19/7.

Lesser Moorhen Gallinula angulata: 20/5, 28/5.

Lily Trotter Actophiloenis africana: 23/11, 28/11, 1/12, 17/12, 22/1, 13/2, 9/2, 6/3, 11/3, 17/3, 25/3, 30/3, 13/4, 19/4, 22/4, 30/4, 13/5, 14/5, 15/5, 20/5, 28/5, 3/7, 6/7, 19/7, 22/7, 23/7, 31/7, 7/9, 21/9.

Ringed Plover Charadrius hiaticula: 21/10, 28/10, 4/11, 9/11, 19/11, 23/11, 28/11, 1/12, 17/12, 22/1, 9/2, 13/2, 6/3, 11/3, 17/3, 25/3, 30/3, 13/4, 19/4, 22/4, 30/4, 13/5, 14/5, 15/5, 20/5, 28/5.

Black-winged Stilt Himantopus himantopus: 12/10, 21/10, 28/10, 4/11, 9/11, 13/11, 19/11, 23/11, 28/11, 1/12, 22/1, 9/2, 13/2, 6/3, 11/3, 17/3, 25/3, 30/3, 13/4, 19/4, 22/4, 13/5, 14/5, 15/5, 20/5, 28/5, 7/9, two birds seen on last date. Between November and May numbers of birds present in the area at all times. 15/5 records twenty-four

birds after which the numbers declined further. 21/9 a few birds.

Little Stint Calidris minuta: 23/11, 28/11, 1/12, 17/12, 22/1, 9/2, 13/2, 6/3, 11/3, 17/3, 25/3, 30/3, 13/4, 19/4, on the last date the birds were seen to be gathering in small flocks; 22/4 a few birds, 30/4 a few birds, 13/5, 14/5, on the last two dates the few birds still to be seen were observed to be assuming summer plumage; 15/5 between twenty-five to thirty birds present; 20/5, 28/5 a few birds noted on the last two dates.

Terek Sandpiper Tringa terrek: 21/10, one bird, 4/11 one bird, 9/11 one bird, 19/3 one bird, 25/3 one bird, 30/3 one bird, 13/5 ~~two~~ birds 21/9 one bird,

Common Sandpiper Tringa hypoleucos: 12/10, 4/11, 9/11, 13/11, 23/11, 1/12, 11/3, 15/4, 19/4, 21/9, Not a plentiful species at the lagoon. Seen occasionally on the beach.

Wood Sandpiper Tringa glareola: Sandpiper most commonly seen at the lagoon. 12/10, 21/10, 28/10, 4/11, 9/11, 13/11, 19/11, 23/11, 28/11, 1/12, 17/12, 22/1, 9/2, 13/2, 6/3, 11/3, 17/3, 25/3, 30/3, 13/4, 19/4, 22/4, 30/4, 13/5, 14/5, one bird only was recorded on the last date. 15/5 four birds seen, 7/9 a few birds, 21/9 a few birds.

Common Redshank Tringa totanus: 9/11, 13/11, 19/11, 23/11, 28/11, on the last three dates numbers of birds in parties were to be seen; 1/12, 17/12, a few single birds seen, 6/3, 11/3, on the last two dates the birds were gathering in groups of approximately twelve; 17/3 upward of fifty birds in a group with a few lone birds here and there; 19/3 one bird recorded on the last date; 25/3 two birds; 30/3 one bird.

Greenshank Tringa nebularia: 21/10, 28/10, 4/11, 9/11, 23/11, 28/11, 1/12, 6/3, 11/3, 17/3, 25/3, 19/4, 22/4, 7/9. A species which was not present in numbers, six or seven birds being the most observed on a visit and more often two or three.

Marsh Sandpiper Tringa stagnatilis: 21/10, 28/10, 4/11, 9/11, 23/11, 28/11, 1/12, 17/12, 22/1, 9/2, 13/2, 6/3, 11/3, 17/3, 25/3, 30/3, 19/4, 30/4, one bird seen on the last date; 13/5 two birds, 14/5 one bird, 28/5 one bird.

Common Tern Sterna hirundo: 12/10, 28/10, 23/11, In October 1970 a Common Tern was recovered from the beach at Lome with a ring bearing the number A.359797, Museum Zoology, HMI, Finland. Details were sent to the Museum by H.E., the British Ambassador resident in Togo at that time. On record also is a chick ringed in Northumberland in 1963 and recovered in Lome on 2/12/67.

Roseate Tern Sterna dougallii: Birds ringed as chicks of this species were recovered at Lome on five dates known to me between 1967 and 1969 by H.E., the British Ambassador. All the birds had been ringed in Ireland.

Common Noddy Anous stolidus: 29/1/71. This bird was found at the water's edge on the beach at Lome. It was injured and unable to fly, and was subsequently sent to me by the British Embassy but was dead when it arrived. The bird was in moult, it had a broken right wing and was very thin.

Senegal Dove Streptopelia senegalensis: A frequent species everywhere

Long-tailed Parakeet Psittacula purpureus: 19/11 a number of birds observed in flight over the lagoon travelling from south to north.

Guinea Wood-Hoopoe Phoeniculus purpureus: 11/3 four birds in flight.

Pied Kingfisher Ceryle rudis: 12/10, 21/10, 28/10, 4/11, 9/11, 13/11, 19/11, 23/11, 28/11, 1/12, 17/12, 22/1, 9/2, 6/3, 11/3, 17/3, 25/3, 30/3, 19/4, 22/4, 30/4, 13/5, 14/5, 20/5, 28/5, 3/7, 6/7, 19/7, 23/7, 31/7, 22/8, 7/9, 21/9. A communal roost and what appears to be a nest site of this species occurs in the face of the sandstone escarpment which backs the lagoon. An attempt to put on record an account of the activities of these kingfishers at the roost site is being made.

Malachite Kingfisher Alcedo cristata: 28/10, 23/11, 11/3, 17/3, 25/3, 13/4, 19/4, 22/4, 13/5, 3/7, 31/7.

Yellow Wagtail Motacilla flava: 21/10 one bird, 4/11 one bird, 23/11 one bird, 28/11 one bird, 1/12 two or three birds, 6/3 one bird, 17/3 one bird.

Yellow-throated Long-Claw Macronyx croceus: 13/11, 19/11, 23/11, 17/12, 9/2, 17/3, 25/3, 30/3, 13/4, 13/5, 15/5, 3/7, 19/7, 31/7, 21/9.

Cisticolas present in the area consistently amongst the sedge and coarse grasses. The specific names of the birds observed have not been established.

West African Fiscal Shrike Lanius collaris: 19/11, 22/1, 9/2, 13/2, 13/4, 30/4, 14/5, 6/7, 23/7, 31/7.

Woodchat Lanius senator: 6/7 a single bird.

Long-tailed Shrike Corvinella corvina: 22/1 six birds in flight.

Copper Sunbird Nectarinia cuprea: 6/7.

Village Weaver Ploceus cucullatus: Present in the area all year.

Orange Bishop Euplectes orix: 6/7, 19/7, 23/7.

Bronze Mannikin Lonchura cucullata: Dates not recorded but seen frequently.

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Additional species observed in 1972.

Purple Heron Ardea purpurea: First sighting of this species at the lagoon. One bird observed on dates given: 28/1, 19/2.

African Hobby Falco cuvieri: 8/1 my first recording of this species although probably often in the area.

Ruff Philomachus pugnax: 7/2 two birds present. First positive recording of this species although it was thought to have been seen last year.

Terek Sandpiper Tringa terek: 19/2 three birds 25/2 one bird. Included as no record of this species in February 1971.

Didric Cuckoo Chrysococcyx caprius: 19/2. An often heard species but owing to possible call confusion with Chrysococcyx klaas I did not include it in the 1971 list.

Senegal Soucal Centropus senegalensis: Seen 11/1 although probably a more frequent species in the area than my records show.

White-throated Bee-Eater Merops albicollis: 19/2 two birds. Not observed in the lagoon area previously although present in some numbers during the dry season about 10km north of Lome.

Striped Grass-Warbler Cisticola natalensis: 19/2, probably more frequent than my records show.

Great Reed Warbler Acrocephalus arundinaceus: 19/2.

Mosque Swallow Hirundo senegalensis: 25/2.

Brown-crowned Tchagra Tchagra australis: 11/2 a pair observed.

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NIGERIAN RINGING SCHEME

With the departure from Nigeria of Bob Sharland (to take up a post in Bournemouth, U.K.), the administration of the Nigerian ringing ~~scheme~~ has been placed by the British Trust of Ornithology in the hands of Dr C.H. Fry, Aberdeen University Zoology Department, Tillydrone Avenue, Aberdeen AB9 2TW, Scotland, U.K.

With the liason now established between EURING and AFRING, it is most desirable that ringers in Nigeria continue to use BTO rings exclusively. Only three or four ringers are operating in Nigeria at present and until more do so it will be the most convenient if such ringers obtain rings, schedules, recovery forms, co-ordinate index forms, etc, direct from Dr Fry. Small stocks can be air-mailed, but people requiring several hundred rings should allow three months surface-mail delivery time.

1972 schedules and returns should be sent to Dr Fry as soon as possible in the New Year, please.

Quite apart from the great amount that has been learnt during the past decade from the spread of netting and ringing operations in Nigeria (about the diversity, abundance wintering fidelity and timing of ~~Palaearctic~~ Palaearctic migrants), it is pleasant to record that accumulating foreign recoveries are beginning to yield information about destinations and other aspects of Palaearctic and African migrants. (see Fry, Ferguson-Lees & Dowsett, J. Zool. (1972): 293-306 for a discussion of Yellow Wagtail migration from Nigeria).

C.H. Fry.

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